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INSIDE

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ABOUT THIS ISSUE

Here is Edward Bear, coming downstairs now, bump, bump, bump, on the back of his head, behind Christopher Robin. It is, as far as he knows, the only way of coming downstairs, but sometimes he feels that there really is another way, if only he could stop bumping for a moment and think of it. And then he feels that perhaps there isn't. Anyhow, here he is at the bottom and ready to be introduced to you.

The theme of this issue is the struggle of workers and Third World peoples against oppressive science. Writing for academics cops out – we must deal with the struggles of people who are oppressed through the complicity of scientists if Science for the People is to mean anything. The articles accordingly deal with industrial safety, science in the exploitation of the Third World, pregnancy testing by the phone company and thought control in South Africa. For the armed Angolan woman on the cover the struggle is not an intellectual excercise.

In addition to the articles contributed, the letters and chapter reports from our comrades add the perspective of those involved in day to day organizing activity. We would like to thank everyone who contributed to and helped with this issue, and encourage others to write.

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CREDIT: photo p.19 Robert Parent

EDITORIAL PRACTICE

Each issue of *Science for the People* is prepared by a collective assembled from volunteers by a committee made up of the collectives of the past calendar year. A collective carries out all editorial, production, and distribution functions for one issue. The following is a distillation of the actual practice of past collectives. **Due dates**: Articles received by the first week of an odd-numbered month can generally be considered for the magazine to be issued on the 15th of the next month. **Form**: One of the ways you can help is to submit double-spaced typewritten manuscripts with ample margins. If you can send six copies, that helps even more. One of the few founding principles of SESPA is that articles must be signed (a pseudonym is acceptable). **Criteria for acceptance**: *SESPA Newsletter*, predecessor to *Science for the People*, was pledged to print everything submitted. It is no longer feasible to continue this policy, although the practice thus far has been to print all articles descriptive of SESPA/Science for the People activities. Considerably more descrimination is applied to analytical articles. These are expected to reflect the general political outlook of *Science for the People*. All articles are judged on the basis of length, style, subject and content. **Editorial Procedure**: The content of each issue is determined by unanimous consent of the collective. Where extensive rewriting of an article is required, the preference of the collective is to discuss the changes with the author. If this is not practical, reasons for rejection are sent to the author. An attempt is made to convey suggestions for improvement. If an article is late or excluded for lack of space or if it has non-unanimous support, it is generally passed on to the next collective. **Editorial statements**: Unsigned articles are statements of the editorial collective. **Opportunities for participation**: Volunteers for editorial collectives should be aware that each issue requires a substantial contribution of time and energy for an eight-week period. Help is always appreciated and provides an opportunity for the helper to learn and for the collective to get to know a prospective member. There are presently plans to move the magazine production to other cities. This will increase the opportunity for participation. For legal purposes *Science for the People* has become incorporated.

SCIENCE, SCIENTISTS, AND THE THIRD WORLD

Three years ago a few members of the American Physical Society startled their colleagues by wearing a lapel button which read "Science for the People". The reaction of some older established members was: "What do you mean– the people? Am I not the people too?"

The question that I want to examine is how science relates to people, but with the avowed bias that science should be for the people, that is, for the benefit of *all* the people. Physicists should not feel threatened by such an idea, but on the contrary challenged into meeting the needs of human beings. In colonial days when we thought of humanity, as Jean Paul Sartre eloquently pointed out, we thought that this world was inhabited by half a billion *men* and one and a half billion *natives.* I want to turn my attention to those three quarters of humanity whom we have totally neglected and which we call the Third World.

The Third World includes the poor in industrially underdeveloped countries, and the people usually of color of all former colonial areas: the people of Africa, Asia, and Latin America. It does not include Russia and its satellites which in this numerical way of speaking form the Second World and, of course, it does not include the world which we study in Western Civilization– our world, which ruthlessly dominated the Third World up to the middle of this century and still does in many areas.

When considering the relationship of physicists especially, to the Third World, we shall have to ask ourselves how much they participated in the domination and exploitation which was perpetrated upon that part of humanity.

"How does this come about," someone will ask, "when in fact all we do is lecture about the atom and x-rays?" Indeed, it comes about because we lecture *only* about x-rays and the atom. Meanwhile, bombs are raining on the people of Vietnam, and electronic sensors sniff for life to destroy it. Someone has designed those gadgets; someone has perfected them with that very same knowledge about x-rays and electrons which we so freely provide. And I find one recent development particularly interesting. I am referring to cluster bombs. These big affairs which can kill everything living over a surface the size of a football field consist of a big bomb containing smaller bombs with pellets or fragments in them. In the past these fragments were made of metal. These could be detected by x-rays in Vietnamese hospitals. But somehow, somewhere, someone who must be a scientist developed pellets that could not be detected by x-rays. So those bombs today contain fragments which are made of plastic. They were not only designed with the proper density not to be detected by x-rays, but they were also designed with the proper mechanical shapes to maim. This is a direct application of the basic principles of physics to the achievment of genocide.

So, shall we stop lecturing about x-rays and the atom? Are they not part of the natural world which we find so thrilling to investigate? No, we don't have to stop lecturing about basic principles of physics, but when we do talk about x-rays, we must talk about how they are used both for and against people. We must talk about airborne infrared detectors over the jungles of South America. This we have not done.

What we have done, what the world knows physicists have done, is put their expertise at the service of the Pentagon and its agencies for technological warfare. The main contribution of physicists has been through their participation in those think-tanks which perpetuate war more scientifically on Third World people. One of the best known of those think-tanks is the Institute for Defense Analysis and its specialized branch for the use of university intellectuals called the Jason Division in which Murray Gell-mann was a participant and Marvin Goldberger the chairman. In years past the Institute for Defense Analysis organized summer institutes on specific aspects of physics for the use of the military. One of these had to do with the application of lasers. Everyone comforted me when I raised questions about the consequences of such co-operation: "Lasers could never be powerful enough to be of use to the military." But somewhere on the California coast our high energy elite spent part of a summer thinking about lasers, and a few months ago there were laser-guided bombs used on the people of Vietnam. The sudden and well-publicized interest of those colleagues of ours in saving the flamingoes of the Everglades will not bring Vietnamese back to life. As far as the general attitude of the Institute for Defense Analysis towards the Third World is concerned, it can be best exemplified by the title of one of its reports which reads, "Research and Development Planning for Warfare in Underdeveloped Areas of the World".

But our role as scientists has not only been through laissez-faire, by not confronting issues in our lecture halls, or through factual contributions to the destruction of human beings. It has also been, and much more importantly, through our intellectual cooperation in exporting the ideology of oppression and of domination, in spreading far and wide the myth of the inevitability of the separation of people into superior scientists and laymen, into classes of exploiters and exploited, into privileged elites and illiterate masses. The very few scientists from the first world who tried through misguided goodwill to participate in educational programs in underdeveloped countries have pointed out the

LETTERS

Dear friends,

I read the magazine you sent with much interest– particularly the "I.Q." article. Right now I'm in premed at the U. of Chicago, but I'm also majoring in anthro: hopefully will help me get a broader idea of medicine within the context of society. I'm also helping to set up an emergency medical switchboard and other related things– still very nebulous, but some good things are happening (like a series of emergency first aid courses dealing particularly with street problems, at least a first step in demystifying the medical mystiqe around here). Right now I think I can do more by focusing my energies on this, than by becoming actively involved in SESPA. But I would like to subscribe. I'm enclosing $5 and can probably send another 5 next month.

Thanks again,
Sharon Stephens
Chicago

Surprise! You ARE actively involved in SESPA. What you are doing sounds like a fine example of Science for the People. Keep up the good work, and thanks for subscribing.

Dear friends,

I am working in the murky field of Urban Renewal, particularly in Minneapolis. Within the framework of the "program" there are some of us here– mostly people in the community– who are working to make the system responsive to the needs of the people (as opposed to the needs of the banks, real estate developers, planners, contractors, etc. etc. etc.) . The vehicle of Urban Renewal **can** be used to elevate the consciousness of those affected, aiming toward the point down the road where we will not be at the complete mercy of the "professionals". I work with people– non-bureaucrats– who seek radical solutions to the urban chaos.

Just what that has to do with SESPA I'm not sure. Perhaps you folks could assist? Perhaps we could assist one another?

I don't, and my friends don't, come out of a science background. We share with you similar concern about allocation of mental and financial resources. But here we deal with millionaires receiving, for example, $24 million worth of one hundred percent Federal guarantee on their loans, while black families **can't get** a pittance of a rehabilitation loan to fix up their homes so that they aren't paying one hundred dollars a month heating bills in the Minnesota winter. We don't get into the Atomic Energy Commission's uncontrolled spending of billions while people die of sickle cell anemia. But the struggle is the same.

If there is no direct way we can benefit each other, I think we can, at least, be encouraged to realize that the battle is being joined on a number of fronts. But if you have any ideas on Urban Renewal, particularly the citizen control of the beast, or if you know people out there who do, I and my friend would be pleased to get in touch.

Thanks again for the work you are doing.

Sincerely,
Charles Warner
Saint Paul, Minnesota

The following letter refers to the China trip described on page 21 in the report of the China collective.

Dear SESPA,

Having just recently received the March Boston SESPA newsletter, containing the announcement of "China Trip on Eastern Horizon," I'm taking the opportunity to comment briefly upon two closely interrelated issues which need to be analysed much more closely by all of us in the movement. One of these I shall call the "spectator syndrome." The other is a long standing topic of discussion in the movement– elitism.

White, middle-class, movement people have a history of being involved in other people's struggles–civil rights, "third world" nations, minority groups in the US other than blacks, factory laborers. Objectively we have struggles of our own but we have ignored them for a variety of reasons ranging from guilt to brainwashing.which mystifies our own oppression. And now, especially with N. Vietnam, Palestine, and China, there is a desire to receive messages of inspiration from ongoing struggles. This spectator tendency is counter productive–no struggle founded on guilt or fascination can have the determination and strength to be successful. And one who cannot analyze and understand the development of his or her *own* existential situation cannot be any other than spectator, nor will she or he have the resources for the uniquely creative kinds of struggle that we must develop in this country.

It occurs to me, for example, that in addition to study groups on China, France. . ., SESPA activists could well benefit from seriously asking some very close-to-home questions such as: How did I get to be a scientist–i.e. what motivated me? What was my conception of the scientist? How did I/do I feel about the power, status, and alleged neutrality of science?How much power do I really have?How do all of the above affect the way I teach and interrelate with both scientists and non-scientists DAY TO DAY (vs. the anti-elitism verbiage at meetings)?Perhaps this isn't as overtly exciting as some other topics, but a sustained examination of such questions might yield some very interesting information about radical as well as non-radical scientists regarding use of power, manipulation, and paternalism.

MORE LETTERS, on page 16

futility of their efforts. *Physics Today* has published several reports about teaching in India or Pakistan in which the main conclusion is that those participating in teaching there accomplished very little. They were overwhelmed by the poverty they saw, the lack of connection between their work and the human misery around them, and the fantastic amount of elitism and personality cult among their privileged students and colleagues who utterly disregarded the needs of their people. But what our colleagues in those positions often did not realize was that their very presence as foreign experts, as revered sage men of nuclear science, tacitly justified the whole pattern of class domination. Far from combating the basic scheme of social inequity, they used its existence as a justification for their own work. Thus, one finds Michael Moravcsik writing in *Minerva* about the reverence with which cab drivers in Lahore, Pakistan, regard the name of Abdus Salam; apparently not realizing that this kind of awe for the elites only serves to make the poor accept their own oppressed position more readily and thus allowing Mr. Salam and a few favored others to keep doing pure science and pure research in Trieste while a couple million East Pakistanis get murdered by the army.

Let us look at the content of the educational aid programs. In the early sixties, as soon as the Physical Sciences Study Curriculum (PSSC) was put together, it was exported to people who live in countries where eighty percent of the population is barefoot in villages with no electricity. One brings to teachers who are part of the local well-off bourgeoisie the PSSC course in which all examples instead of being taken from collisions of billiard balls are drawn from collisions of nuclear particles. In this manner one turns one's audience away from its nontechnical culture and surroundings towards some remote, ultimate nuclear truths which they cannot touch and which they can only admire through the descriptions offered by the traveling mandarins dispatched from the seat of the empire. And this guarantees the state of powerlessness of those to whom one is teaching—their powerlessness in front of our technological and technocratic civilization. Students could not reproduce experiments with atoms. They could only admire the fact that we can do it. And they could only imagine us as living in a better world because we could do such experiments. The result of this straightforward exporting of the inaccessible glitter of modern science is that the best elements in the universities of underdeveloped countries emigrate; they get drained into our pure research programs, into our elite way-of-life; they succumb to our intellectual propaganda. even when we propagate it unconsciously. Those who have been brain-drained can only meet frustration if they ever go back to their country of origin. They have nothing to connect to there. They need contacts and the level of development which they met in the United States, and they end up in that state of total dependence in which they have to beg for money to buy American equipment. Through this elite type of education into which we have misled them, we have guaranteed their state of uselessness to their own country. And this is not a small phenomenon. It goes far beyond the pure numerical statistics of the brain drain although those in themselves are rather appalling: for instance, in the medical sciences, the number of doctors trained in Third World countries and brain-drained into this country per year is equivalent to the output of the fifteen largest medical schools in this country.

But one must realize that physicists do not necessarily participate knowingly in this great enterprise of cultural imperialism. We are in fact being used, being used by those who who really decide how money gets spent for foreign aid. Having been trained to consider science as socially neutral, physicists lack the political background to analyze what the social consequences of their actions are. On those pleasant trips to exotic lands the professor becomes an overall advisor, and he makes up proposals which are meant, he thinks, to solve everything. And here we meet the great arrogance of expertise. One of those proposals, put forward by Stevan Dedijer, suggests that every president of a newly independent nation have science advisors around him, a copy, I suppose, of the President's Science Advisory Committee which has had its hour of glory in this country. Similarly, Michael Moravcsik, writing some years ago from his office at the Livermore laboratory, proposed to send two hundred U.S. scientists yearly to underdeveloped nations to help them. But what he seems to have forgotten is that through the brain drain phenomenon, each year, not two hundred, but two thousand scientists from underdeveloped nations are brain-drained into the United States and that figure has been increasing with time. Two hundred scientists are no payback for the initial plunder. Meanwhile, we, as scientists, continue to help propagate the myth that science is a solution to everything. As if when scientific research goes on in a country, the country will develop and its people will be free. This has been proven wrong and a United Nations study on the Second Development Decade puts it very simply: "The argument that all research ultimately benefits everyone is now known to be false." Engaging on such a path only guaran-

tees the existence of class structures by reinforcing the position of privileged ones over unprivileged ones. Science per se, without participating in the total challenge of the existing system of class exploitation can lead only to the reinforcement of that very system.

So we have been used. We have been used for what Eugene Skolnikoff calls "prestige and propaganda" in his book called *Science, Technology, and American Foreign Policy* and Skolnikoff should know: he was on the staff of the President's Science Advisory Committee. Our best

known names have been used for propaganda purposes, including Oppenheimer who in 1961 was taken on a glorious tour of Latin America sponsored by the OAS supposedly to explain the beauties of nuclear science. In fact, this trip, which made him front page news from Mexico to Brazil, was equivalent to the trip the first astronauts were sent on through underdeveloped countries to suggest, I suppose, the cosmic superiority of capitalism.

If we look at our condition in historical perspective, we can say that scientists, in our present civilization of oppression, a civilization which thrived upon the slave trade and pursues the destruction of Vietnam, have been playing the role which in earlier times was played by the religious missionaries. They were the intellectual smoke screen, the ideological cover-up for the most brutal enterprise of colonization. They were used to teach natives respect for the rulers. Scientists today in fact perpetrate the oppression of the Third World as they whirl around the world sounding the promises of technical nirvanas to come, wrapping into the wonders of science the capitalist social order and bourgeois ideology.

However, it is never too late to look at people of the Third World as real human beings rather than as a reservoir from which to extract the high potential students, from which to select a few, to mold them to our own technological image. It is, in fact, high time to consider that science for science's sake is obsolete. And the American Association for the Advancement of Science must have its name changed to the American Association for the Advancement of Human Welfare. I wish also to say something at this point to the graduate students who presently feel the weight of the system's utter lack of vision and purpose. I would like to point out to those who created the American Physicists Association, that they too fell into the bourgeois ideological trap of egotistical survival by fighting for narrow group interests instead of uniting with other victimized sectors. Such an association is again a group for the defense of privileges, and it will not radically change the social order; graduate students cannot win anything of consequence by taking on alone the oppressive system and asking for little personal accomodations within it.

So let us look together for what must be done. If we all agree in theory that science for the people is worthwhile, then let us put it into practice. Let us continue talking in our classrooms about the beauty of physics and science. But let us link it to its daily results and probe into the true causes of those results. Let us in our research aim towards those things which we know may serve people. There is presently a program going on in the biology department at the University of Chicago called "Science for Vietnam", write and find out about it. Several people have also discussed attempting to use ultra sounds to detect those famous plastic pellets from the cluster bombs when they lodge themselves in Vietnamese flesh. And when you cannot get a grant to support such research, face up to it and to what it means; discuss it; speak up; live.

But no little program however well-intentioned it may be will be able to change the whole atmosphere in which we operate. We have to do much more. We have to change a whole consciousness. This is where the attitude of the Chinese comes in. This is where the idea of serving the people has to take a meaning—a precise, practical meaning. We all know now that in China the worker's advice and the peasant's criticism help the researcher to find useful paths, in an atmosphere of respectful equality. Our own motivations have to come from concern and respect for all human beings too; we have to abandon and then combat the ideology of our biology colleague—Charles Darwin; we have to combat his ethics of aggression and competition on which the exploitation of the Third World is ultimately based.

To make as clear as possible what a commitment to Science for the People means, let me illustrate it in the medical sciences. Let me compare the kind of flamboyant scientist which our Christian white world has produced, Doctor Barnard of South Africa and heart exchanges, to the doctors whom the Third World will remember, if anonymously. Doctor Barnard makes people believe that science is good because it can perform individualized theatrics (which ends up anyway with the death of the patient) whereas what the Third World needs are medical people who will go to villages to teach people how to take care of daily health problems, how to arrange for proper sanitation, doctors who will travel thousands of miles, not on lecture tours but on large scale immunization campaigns. This does not require any show like that put on by Dr. Barnard in the Rio de Janeiro Sta-

dium while most of his audience was suffering from intestinal parasites.

Do not think that as physicists, you can find excuses for not serving the people, including the people of the Third World, by pretending that they are too far away. The Third World is no further than the nearest slum, which probably surrounds your university. And at some urban universities, a few scientists have started community oriented programs to offer to the people technical tools which can put some power into their own hands. But such programs do not pop out of a vacuum, or from a sudden fever of good will. They depend upon understanding the political and social forces which created and work to maintain the ghetto. For, in the end, you will only be able to understand what is to be done when you have faced squarely the fact that there is no neutrality in human affairs and that, therefore, we all must face up to our responsibility.

M.B.

This paper was originally given as a talk at the American Physical Society meeting in January 1972.

PSYCHOLOGY IN THE LEGITIMATION OF APARTHEID

A South African psychologist in England follows up on "Science in the Justification of Class Structure," Science for the People *magazine, vol. IV, no. 1, Jan. 1972*

From an historical point of view, the capitalist mode of production and distribution has led to the emergence of two characteristic types of political system: the liberal democracy exemplified by England and the United States of America on the one hand, and the repressive police state exemplified by Nazi Germany on the other. The undisguised and officially sanctioned use of torture by British troops in Northern Ireland, and the genocidal foreign policies of the United States government, do not invalidate this important distinction. It is sometimes edifying to examine the uses of science in repressive police states from the point of view of the relationship between economic infrastructure and cultural superstructure in capitalism generally. Tendencies which are latent or disguised in liberal democracies can often be more clearly perceived and understood when viewed in comparison with more extreme manifestations of such tendencies elsewhere.

One crucial area of investigation centers on the role of science in social control. Men and women living in an industrial capitalist society have to acquiesce in the class structure if the system is to work. Since the class structure is inegalitarian and cannot be made to operate in the interests of the vast majority of the people—wage-earners, for example, are condemned to work at creating surplus value for other people, who need not work at all for their money—social control has to be exercised in order to gain the necessary acquiescence.

Social control takes two forms: coercion(the use of physical violence or the threat of violence by police, army, etc.) and legitimation, or thought control. [1] If through legitimation the have-nots can be persuaded of the inherent morality of the existing state of affairs, then the necessity for the use of coercion declines. And if the legitimation process succeeds in convincing both oppressed and oppressor that the oppression is either nonexistent or inevitable, then the trappings of liberal democracy can be safely adopted, and we are faced with the hegemonic and almost universal false consciousness which has permeated many societies in recent decades.

In examining the uses of science in social control, a great deal of attention has been devoted to the role of the natural sciences in coercive control (the technology of armaments, for example) while the less conspicuous involvement of the social sciences, and particularly psychology, in the process of legitimation, has been relatively neglected. B.F. Skinner's recent book, *Beyond Freedom and Dignity,* represents one approach to the technology of social control which has reactionary overtones. [2]

In South Africa one is confronted with a monstrous system of class exploitation, reinforced and intensified by racial divisions. White South Africans, who constitute less than one-fifth of the total population, enjoy one of the highest standards of living in the world, with a per capita

income fourteen times higher than that of the black population. If income were redistributed in South Africa, not equally, but in accordance with the degree of inequality existing in the United States, the average White income would drop by approximately half. [3] The per capita income of Africans is approximately $120, and there is wide-spread malnutrition and even starvation in rural areas. In a typical African reserve studied by Professor John Reid of the Natal University Medical School recently, almost fifty per cent of children born die before the age of five, and the situation is deteriorating rather than improving. [4] The luxurious standard of living of White South Africans is not unconnected with the inhuman exploitation of the indigenous black population.

In order to exploit a vast population, it is, of course, necessary to exercise thought control. Black South Africans have to be kept docile, and it is necessary "not to enslave Bantu workers to the comforts, luxuries, and tastes of the White man" in the words of the Minister of Bantu Administration and Development. [5] This has been clearly perceived by the psychologically sophisticated white ruling class, at least since the Premiership of Dr. H.F. Verwoerd, himself a Professor of Psychology for several years after obtaining a PhD for a dissertation entitled "The Blunting of the emotions".

Various steps have been taken in an effort to prevent black aspirations from rising, and perhaps the most crude has been in the field of school education. Since 1955 the annual budget for African education has been pegged at under $20 million, which is one-thirtieth of what is spent annually on coercive social control, i.e. Defense, Police, and Prisons. With inflation and a growth in the number of schoolchildren, the per capita expenditure on African education has naturally declined since 1955. At present $17 is spent annually on the education of each black school child. $187 is spent on each White school child. [6]

More subtle attempts at legitimation can be seen in the activities of some of the white intelligentsia. Psychologists are constantly being exhorted to seek scientific justification for the system which exists. The role of the Psychological Institute of the Republic of South Africa (PIRSA) has been quite unambiguous in this regard. In order to demonstrate the overtness of these exhortations, it is worth quoting from Dr. P.M. Robbertse's recent Presidential Address to PIRSA. [7] According to Dr. Robbertse, the wide acceptance by American psychologists of "the equalitarian dogma" is attributable to a number of factors, such as "the 1954 decision of the American Supreme Court in regard to the admission of pupils to schools" and "the efficient way in which the communists spread the concept of equality for their own purposes". More specifically, "by using pseudo-scientific arguments, based on questionable research results, and mass communication media, the integrationists are attempting to present a picture indicating that there are no innate differences between people and that all differences may be ascribed to environmental factors only. . . Those who are convinced of innate racial differences are not engaged in research and publication to the same extent as the integrationists. . . Members of the Psychological Institute of the Republic of

South Africa are encouraged to undertake research in this field on a greater scale because it concerns the scientific basis of separate development and strikes at the root of our continued existence."

The traditional *idee fixe* of "scientific" racists is intelligence. If black people can be shown to be congenitally and unmodifiably stupid, then surely there is no objection to using them for cheap manual labor, and surely they can make no responsible use of the franchise. The recent publications of E.J. Eysenk and R. Herrnstein will undoubtedly be used by white South Africans in the legitimation of apartheid in the way that the "scientific" racism of A. Jensen was used. [8] Jensen's notorious article in *Harvard Educational Review* in 1969 was ecstatically received by psychologists and others in South Africa, as "proving scientifically" what white South Africans had known all along. At one prominent university, the article was prescribed for students in the Department of Education and the subsequent issue of *Harvard Educational Review,* containing critical evaluations of Jensen's views, mysteriously vanished from the university library as soon as it arrived. The press coverage of the original article, needless to say, was wide and uncritical.

Not all psychological research in South Africa is narrowly subservient to the interests of the dominant class, and work is occasionally published which is subversive of the ruling ideology. In connection with the race-intelligence issue, a minor flurry of embarrassment was caused by a study by Biesheuvel and Liddicoat, published in 1959. [9] This study investigated the average IQ scores, not of Africans and Whites, but of Afrikaans-speaking and English-speaking Whites (Afrikaners, who are of predominantly Dutch descent, have traditionally formed the power elite: every South African Prime Minister has been an Afrikaner. The English-speaking Whites, who are of British descent, have traditionally formed the commercial and financial elite, although Afrikaners are ascendant in this field.). Biesheuvel and Liddicoat found a seven-point average I.Q. difference between huge samples of these sub-groups, with English-speaking Whites scoring better than Afrikaners. This difference was shown to exist (to a greater or lesser extent) at all socio-economic levels, and remained when education up to university level, and rural-urban differences were controlled.

These results, apart from appearing unflattering to the power elite, were also somewhat awkward for "those who are convinced of innate racial differences" to explain away. When the dust finally settled, official psychological bodies had concluded that the difference was entirely explicable in environmental or cultural terms, rather than genetic terms[10]. The authors of the original study had to remind the "scientific" racists: "Unlike non-Whites, who are sometimes reluctant to do an intelligence test because they believe that the test results may be used to prove genetic inferiority on their part -- as has in fact been done -- Afrikaans-speaking pupils have nothing to fear on this account, as the suggestion of genetic causation has not ever and is not now being made" [11]. This came as a great relief to Afrikaner racist psychologists. It did not lead to the abandonment of the geneticist doctrine in the interpretation of black-white I.Q. differences, however; quite the contrary, as Dr. Robbertse's remarks quoted above imply. The "official" line is that the English-Afrikaner I.Q. difference can be fully accounted for by cultural factors, but that black-white I.Q. difference is primarily due to genetic factors.

Racism and class exploitation are not peculiarly South African phenomena. The range of inequality in South Africa is, however, greater than that found in liberal democracies. The amount of absolute deprivation of the bare necessities for life which is generated at the bottom of the class structure is correspondingly greater.

The more rigid the racial barriers against class mobility and the more extreme the injustices and inequalities, the more overt become the processes of social control. In some cases, the excesses of coercive control have resulted in the erection of a full-scale police state. Since 1950, there have been no fewer than 8 million arrests under the South African Pass Laws. The average rate of arrests under these important instruments of coercive control is currently 2,000 per day. Consequently, the average duration of a "trial" of an African under the Pass Laws is about two minutes[12].

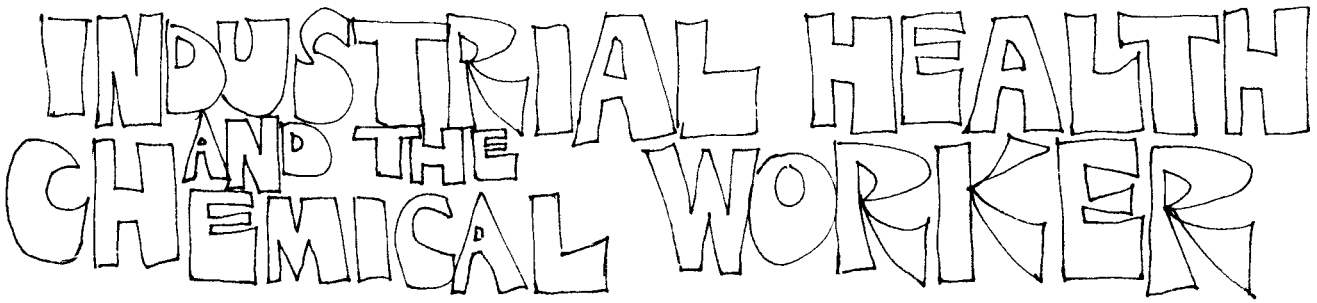
Like the process of coercive social control, legitimation and thought control have been implemented overtly in South Africa. As a consequence, psychology plays a conspicuous role in reflecting and reinforcing existing social structures. On the other hand, of possibly greater potential significance is the fact that psychology sometimes provides the tools with which ruling class ideology can be ruptured. Often in comparatively muted or disguised forms, the processes discussed and illustrated with reference to South Africa can be observed in all capitalist societies.

A.C.

NOTES AND REFERENCES

1. This distinction was, as far as I can determine, first made by the German sociologist Max Weber. Erich Fromm went on to argue that a society must reproduce its human resources as well as its material resources, i. e. it must reproduce people who are contented to be miners, etc.
2. See Noam Chomsky's brilliant refutation of this new book on social control in *The case against B. F. Skinner,* New York Review of Books, December 30, 1971, Vol XVII, Number 11, pp. 18-24.
3. The most recent detailed study of income distribution in South Africa was done by W. Langschmidt of Market Research Africa (see Financial Mail, April 18, 1969). In the United States, the top 1/5th earns 44% of the national income, according to the U. S. Bureau of Census pamphlet *How Our Income is Divided.* The calculation was based on data contained in these two sources.
4. Professor Reid's extremely careful research has been confirmed by informal surveys in mission hospitals in other areas. A summary of these findings, together with some startlingly vivid descriptions of destitution and degradation among Africans in resettlement camps, is contained in Cosmas Desmond's recent book, *The Discarded People.*

5. *Cape Times*, October 27, 1966.
6. The per capita expenditure on Africans is decreasing; it was 24 dollars in 1954. Figures are taken from the *Cape Argus*, April 24, 1968. Just for good measure, African school children are now the only ones who have to pay for their own school books and stationery.
7. Robbertse, P. M., Racial differences and psychology: summary of Presidential Address. *Proceedings of the Psychological Institute of the Republic of South Africa—PIRSA*, 1967, 6, p. 7.
8. The book by H. J. Eysenck referred to is issued in the United States under the title *The IQ Question*. The article by R. Herrnstein, published in the December issue of *The Atlantic Monthly*, was superbly analyzed in *Science for the People*, January, 1972, Vol. IV, No. 1, pp. 6-12.
9. Biesheuvel, S., and Liddicoat, R., The effects of cultural factors on intelligence-test performance, *Journal of the National Institute for Personnel Research*, 1959, 8, pp. 3-14.
10. Langehoven, H. P., A note on "The effects of cultural factors on intelligence-test performance" by S. Biesheuvel and R. Liddicoat, *Journal of the National Institute for Personnel Research*, 1960, 8, pp. 151-152.
11. Biesheuvel, S., and Liddicoat, R., Reply to Dr. Langenhoven's comments on "The effects of cultural factors on intelligence-test performance," *Journal of the National Institute for Personnel Research*, 1960, 8, pp. 153-155.
12. The official figures are given in the annual *Survey of Race Relations*, published by the *South African Institute of Race Relations*, and edited by Muriel Horrell. The 1969 volume gives the average daily number of prosecutions as 1900. The *Rand Daily Mail* newspaper instituted a probe in 1968, and sent observers to trials for Pass Offences in several different courts. The observers heard 123 trials in 225 minutes. See *Rand Daily Mail*, January 19, 1968, or *Survey of Race Relations*, 1968, p. 172.



When reaching for a fresh bottle of chemicals on the laboratory shelf, how often do we as chemists think about how the chemicals got there? Who actually made the chemicals? Who put them in the bottle? When we open the bottle and place it under a ventilating hood to avoid breathing the fumes, do we ever ask ourselves who put the chemical in the bottle in the first place? Did they do it safely, under conditions of good ventilation?

When we use a radioactive isotope or radioactive metals in our studies, how often do we as scientists and engineers think about those who made the materials? Who mined the uranium? Who machined the metals? Who tested the radioisotopes for sterility? What effect did these activities have on their health?

When we use asbestos-based materials for insulation in our labs or in our homes, do we ever give thought to where the asbestos comes from? Who produces it? How?

And when we fight to cut down industrial pollution because of its adverse effect on people's health, do we at the same time give thought to the dangers faced by the men and women working inside the plants, at the source of the pollution?

These are not questions we usually give much thought to. Our teachers didn't talk much about them in school. Newspapers and magazines deal with matters considered of greater national and international importance. And there is little else in our background or culture that inclines us to these questions.

But to the millions of production workers in this country who make the enormous number of products that characterize and ultimately define our lives, these questions are of life and death importance. Let's look at some facts about health and safety hazards in the workplace, published by the U.S. Department of Health, Education, and Welfare:

Of 6000 men who have been uranium miners, an estimated 600 to 1100 will die during the next 20 years as a result of radiation exposure, principally from lung cancer.

Three and a half million American workers exposed to asbestos face a dual threat: not only are they subject to the lung-scarring pneumoconiosis of their trade, asbestosis, but they are endangered by lung cancer associated with inhalation of asbestos fibers. Recent studies of insulation workers in two states showed 1 in 5 deaths were from lung cancer, 7 times the expected rate; half of those with 20 years or more in the trade had X-ray evidence of asbestosis; 1 in 10 deaths were caused by mesothelioma, a rare malignancy of the lung or pleura which strikes only 1 in 10,000 in the general working population.

Among soft coal miners, the death rate from respiratory disease is five times that of the general working population.

These are some of the worst cases known of occupational disease. They are not, however, exceptional cases in an otherwise satisfactory situation. Rather, they are the tip of an iceberg whose dimensions and composition are even today little known. The National Safety Council estimates

that each year;

***18,000 workers die in industrial accidents
***90,000 workers are permanently disabled
***2.2 million workers are injured sufficiently to miss work for more than one day
***25 million workers are injured sufficiently to miss work for one dav.

Given the National Safety Council's association with management, it should come as no surprise that even these large figures represent an underestimate of the accident and injury figures. (See box.)

If national accident and injury figures are understated, the incidence of occupational disease is difficult to estimate by any standards. However, based on statistics in California, where cases of occupational disease must be reported, the U.S. Department of Health, Education, and Welfare estimates that over 336,000 cases of occupational disease develop each year among the 75 million employed U.S. civilians [1]. Clearly, if account were taken of long-term effects like lung disease and related heart stress, lung cancer, and the intensified effect of several environmental stresses working together, the true figure would be much larger.

Working people are acutely aware of health problems caused by their work. A U.S. Department of Labor survey conducted in 1969 by the University of Michigan Research Center shows that health and safety hazards rank second among problems faced by workers, based on a nationwide sample of the workforce [2]. According to the October, 1971 issue of *Occupational Hazards*, a management-oriented magazine, this lays to rest "the tired old myth that American workers aren't vitally concerned with safety and health conditions of the workplace because of their near-total preoccupation with wages and fringe benefits."

In addition to worker concern, radical professionals and other activists are beginning to show major interest in this area. Within the last year conferences on occupational health by interested medical and technical people have been held in New York, Chicago, and New Haven. The first national conference of the New American Movement (NAM), held in Davenport last November focussed on occupational health. The Medical Committee for Human Rights (MCHR) has adopted occupational health and safety as a major national priority.

Why all this recent interest in occupational health and safety? Occupational diseases, after all, have been known for centuries, and workers' struggles around health and safety have been taking place for many years. Among the immediate causes for the upsurge in interest are:

(1) The growing consciousness by workers of the dangers of long-term, sub-toxic exposures to industrial pollutants. This has, no doubt, been significantly influenced by recent public controversies about environmental hazards. If long-term exposure to relatively low levels of industrial pollutants presents health hazards to the general population, what is the effect on those who work at the very source of the pollution?

(2) Increased desire of the New Left to relate to workers. As a result of a variety of political experiences, radi-

A WORKER READS HISTORY BY BERTOLT BRECHT

WHO BUILT THE SEVEN GATES OF THEBES?
THE BOOKS ARE FILLED WITH NAMES OF KINGS.
WAS IT KINGS WHO HAULED THE CRAGGY BLOCKS OF STONE?
AND BABYLON, SO MANY TIMES DESTROYED,
WHO BUILT THE CITY UP EACH TIME? IN WHICH OF LIMA'S HOUSES,
THAT CITY GLITTERING WITH GOLD, LIVED THOSE WHO BUILT IT?
IN THE EVENING WHEN THE CHINESE WALL WAS FINISHED
WHERE DID THE MASONS GO? IMPERIAL ROME
IS FULL OF ARCS OF TRIUMPH. WHO REARED THEM UP? OVER WHOM
DID THE CEASARS TRIUMPH? BYZANTIUM LIVES IN SONG;
WERE ALL HER DWELLINGS PALACES? AND EVEN IN ATLANTIS OF THE LEGEND
THE NIGHT THE SEA RUSHED IN,
THE DROWNING MEN STILL BELLOWED FOR THEIR SLAVES.

YOUNG ALEXANDER CONQUERED INDIA.
HE ALONE?

CEASAR BEAT THE GAULS.
WAS THERE NOT EVEN A COOK IN HIS ARMY?
PHILIP OF SPAIN WEPT AS HIS FLEET
WAS SUNK AND DESTROYED. WERE THERE
NO OTHER TEARS?
FREDERICK THE GREAT TRIUMPHED IN
SEVEN YEARS WAR.
WHO TRIUMPHED WITH HIM?

EACH PAGE A VICTORY,
AT WHOSE EXPENSE THE VICTORY BALL?
EVERY TEN YEARS A GREAT MAN,
WHO PAID THE PIPER?

SO MANY PARTICULARS.
SO MANY QUESTIONS.

cals have become aware of the problems facing workers, not only low income, but economic insecurity and the oppressive, alienating conditions under which they work. Whenever they have focussed on these problems radicals have been struck by the large number of health and safety hazards in the workplace. Previously they had been no more aware of them than most people of similar middle-class background. For those with medical and technical training, awareness of occupational health problems has opened up another possibility for engaging in a science directed toward meeting the needs of the people of this society. It also allows for the development of relationships between workers and scientists based on shared needs.

(3) Passage of the Occupational Health and Safety Act of 1970. This Act covers 55 million workers in 4.1 million plants throughout the country. It sets up revised standards for health and safety in these plants, and provides a system of federal inspectors to check on compliance with these standards. Workers can also file complaints of standards violations and bring about inspections of their plants. The effect of this law has been to raise hopes among workers that health and safety conditions will improve—especially in plants where unions have provided information about the law.

However, the law is so seriously deficient, so overwhelmingly biased in favor of management, that the extent of new protection it offers the workers is questionable. First, the standards are set by the Secretary of Labor, usually in consultation with management-oriented standards groups, based on a compromise between worker health and employer cost. Thus under this Act, the carbon monoxide level in plants has been set at a maximum value of 50 parts per million, whereas the Environmental Protection Agency sets its value at only 9 parts per million for the general population. Similarly, the maximum average noise level for an eight hour day is set at a compromise value of 90 decibels (labor wanted 85, and management 95), even though over a working life of 30 years this is known to cause nerve deafness in 16% of the people so exposed.

The maximum fine for a violation of these standards is only $1,000, with typical fines running much less. For example, the Mobil Refinery in Paulsboro, N.J. (see box) was fined a total of $7,400 after 90 violations were uncovered. Lest this cause hardship for companies, the fines are reduced by 50% when a company corrects the violation. On top of all this, the federal government has only budgeted funds for about 500 federal inspectors this year. Since the Act covers 4.1 million plants, that means each inspector must cover 8,200 plants. At one plant a day, seven days a week, the inspector will visit each plant once every 22 and a half years. Listing of inequities in the law could go on and on, but weak as it is, the expectations it arouses are real and may provide the impetus for worker action.

* * *

Given the increased interest in occupational health and safety, what have concerned scientists and medical people been doing in this area? What can they do?

In New York City, a course on occupational health and safety, sponsored by District 8 of the Oil, Chemical and Atomic Workers International Union (OCAW) has provided a focus for activity. The OCAW approached SESPA members and other scientists last Spring for assistance in dealing with serious health hazards in chemical plants and oil refineries in the New York-New Jersey area. First, a conference was called in which over 50 scientists and workers explored the nature and dimensions of the health hazards. For those who had never been inside a chemical plant, the conference was an eye-opener. Workers told of working over open vats of organic solvents such as phenol (which is toxic and can be absorbed through the skin), with no protection, poor ventilation, and without being informed of the dangers of the chemicals. Women told of making insecticides using chemicals known to have harmful effects on humans, under conditions that left their bodies smelling of the chemicals long after working hours. The recurrent theme throughout the conference was the lack of information provided by the companies on the medical effects of the chemicals used and the lack of access by workers to medical information; in many cases workers using brand name products were not even told their compositions. In response to this, a group of the scientists formed the Scientists committee for Occupational Health (SCOH) with the aim of conducting a course on occupational health and safety especially designed to meet the needs of workers on the plant floor. (The few courses given in the recent past had always been for health professionals and/or union leaders.) Members of SCOH first read the existing literature to find out what was known technically and medically about these problems. Like most people trained in science or medicine today, we had no formal training in these subjects, nor had we even been made aware, for that matter, that these were problems. From this we put together a course manual in which we tried to translate the material we learned from technical jargon into everyday English. This was published by OCAW under the title "Industrial Hazards. . . A Workers' Manual for Controlling the Work Environment." It is available for $5 (to cover costs) from the OCAW, Citizenship-Legislative Department, 1126 16th St., N.W., Washington D.C, 20036.

The course itself was given one night a week for thirteen weeks at the Rutgers Labor Center during the fall term of 1971. Forty to sixty people from chemical plants and oil refineries in New Jersey and as far away as Philadelphia and Long Island attended the course regularly. The course was an important learning experience for all, dramatically different from the usual college course in terms of the participation and interest of those attending. Due to the large number of chemical workers attending, the first half of the course was devoted to chemical hazards—gases, dust, solvents, plastics, metals, etc. The last half covered physical hazards (radiation, noise, welding, etc.), a short history of other labor struggles around health and safety (particularly the Black Lung fight in Kentucky and West Virginia), and a discussion of the Occupational Health and Safety Law of 1970.

The two-hour session usually began with a discussion of a particular organ or subsystem of the body and its defense mechanisms—for example, the respiratory system, liver,

kidneys, skin, etc. We then discussed the effects and medical symptoms of exposure to one or more chemicals that subsystem. Finally, a major part of every session was spent training workers to use monitoring devices such as noise meters, air samplers, etc. We felt that such worker training was extremely important in two respects: First, there is no possibility of finding or training enough medical and technical people in the near future to study in detail the hazards at every plant. Second, we felt it crucial to give workers the tools with which they could control their own work lives, not to substitute a new set of experts--union scientists--for the old set--management scientists.

"To the lucky ones:

We congratulate you on having survived the epidemic of job-connected disabilities which has plagued the Refinery during the 'Two Million Manhours' period. You must have been surprised to learn that two million man hours have passed without a lost time accident. You probably thought of all the accidents you have heard about had deprived us of what the Refinery Manager, in his letter calls an 'outstanding record.' But how naive we were! The Medical Department knows how to turn some accidents into 'sicknesses' or to declare an employee able to work, although his own doctor has advised him to rest at home. This is all part of the Company's 'no lost-time accident' game. This is not a fun game. It's a game which the Management almost never loses.....

Even now, when the Company is boasting of it's 'safety record' , there are employees with work connected disabilities: one has a fractured leg bone; another, a severely lacerated finger which required a skin graft; an employee who fell on the job and struck struck his head is now in the hospital (sick says the Medical Department, not an accident); another has a severe back injury which requires surgery; an employee has asbestosis; and two lab workers possible lead poisoning."

Many technical and political issues were brought into sharp focus. For example, workers took noise meters into several plants after the session on noise. Workers who informed employers of their intentions beforehand found that management either consented at first and then quickly changed its mind, or flatly refused often threatening disciplinary action or firing as well. Those who did not inform management made measurements and reported back the results later. These reports provoked intense discussion on the method of approach, the response to management pressure, and what to do with the results. While some might view such scientific measurements as neutral events, in this context they illustrated the complexities of labor-management struggles. These include relationships among workers in the plant and between workers in different plants (if workers fight a certain hazard, can the company shift production to non-union plants?), the relationship of workers and the plant managers, the relative strength of labor as reflected in labor law, etc.

As a follow-up to the course, scientists and medical people have been working with people in various plants, helping to test, make medical evaluations and give technical advice. While this effort has been limited by the relatively small number of scientists and medical people available, and the slowly developing nature of struggles at the plants, it may offer ideas on how a relatively small group of concerned people can get involved in occupational health and safety.

Often, first contact with working people must be made through local unions. However, community organizing projects, labor union groups for peace, or rank-and-file groups within unions may provide useful contacts with workers concerned about occupational health and safety. After making contact and getting a general idea of problems within the plants, the first task facing most scientists and medical people is educating themselves (see reference list at end of article). Also, some people, perhaps lawyers or law students, may be helpful in learning about federal and state occupational health laws. Besides information from local, usually university, libraries, literature packets are available from the national office of the Medical Committee on Human Rights, 710 S. Marshfield, Chicago, Illinois 60612. Also, MCHR has been sponsoring a series of weekend conferences and mini-courses on occupational health throughout the country. Local people may be able to attend one nearby or offer one of their own. In many cities union groups will want to co-sponsor these (e.g. UAW co-sponsored a Chicago conference with MCHR, and in New Haven, a local conference was co-sponsored by the Central Labor Council). MCHR or New American Movement speakers may be available. To follow-up, local people might begin doing tests or training workers to do them. Or they may wish to present a course on occupational health and safety, or do both. If sufficient medical resources are available, perhaps a local medical school, the group might explore setting up a clinic. If, as in many cases, little is known about health hazards of materials workers are handling, epidemiological studies may be needed. These can be based on union records, particularly where unions have their own welfare and retirement funds. This is time-consuming work, but very useful in finding if workers are subject to special diseases or, as more often occurs, are more susceptible to ordinarily occurring diseases such as lung cancer or various other types of cancer.

The scientist who is a worker in industry has a unique opportunity. Needless to say, companies frown on contact between science workers and production workers and especially on any interest by scientists in worker problems. Workers too are kept as much as possible in the dark about potential health and safety hazards. For example, under law, companies are compelled to keep a log book of accidents in their plants, but few of these allow workers access to such records. Similarly, health tests of new chemicals or new apparatus are kept from workers. Although most in-plant scientists do not have

access to these records either, they can be of assistance in other ways. For example, they may be in a position to do an informal health and safety survey of the plant and report the findings to production workers. Or they may be able to do a literature search on potential plant hazards. They may help to prepare a union grievance brief, or suggest supporting scientific references.

Let us consider now some of the long-range problems and perspectives of work in occupational health and safety. First, the medical and scientific problems presented at a plant level are often difficult to assess, since the effects of many occupational hazards (e.g. lung cancer) result from multiple causes some of which are unrelated to work(e.g. smoking, general environmental pollution, hereditary predisposition to the disease etc.) . In addition many sources of potential hazards are encountered in any one workplace. Therefore, it is often quite difficult , and requires careful statistical studies, to pick out a particular occupational cause for an observed effect. Here a detailed knowledge of the actual production process is vital, requiring major input from workers on the shop floor. Without production worker collaboration, the scientist cannot understand concretely the medical hazards encountered, thus having only vague, almost useless abstractions to offer.

Finally, one of the most difficult problems for radical scientists is their relationship to the labor unions. On one hand, unions are the only organizations workers have to protect their wages and job security, and despite their limitations workers by and large support them. On the other hand, unions have chosen to defend a narrow set of worker interests—wages and fringe benefits—rather than challenging the repetitive, dehumanizing nature of industrial work or management's prerogative to control the work process. (See for example Andre Gorz [3]) Then, to protect the wage gains embodied in the union-management contract, unions must live up to their no strike pledge, and thus often find themselves allied with management in opposing job actions and wildcat strikes over working conditions.

The result has been that a growing number of production workers are alienated from their jobs and from the unions which at best act only with reluctance to fight for better working conditions. These frustrations boiled over recently at the Vega plant in Lordstown, Ohio, where young workers conducted a "slowdown" and, management claims, even sabotaged the production process, higher wages and the recession notwithstanding [4]. The shortcomings of many unions produce difficulties for the radical scientists who must often work through the unions to develop a broad-based effort on occupational health and safety, while stopping short of total identification with them. There is no simple resolution of this tension, but it points to the necessity for scientists to continually promote worker interests, and not simply to perform a service function for the union leadership.

But if there are problems with the unions, there are also important possibilities opened up by the occupational health and safety issue. Not only does work on this issue

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As for elitism, the trip seems to contribute to rather than lessen the mystique of science and scientists. There's a strong element of going off and bringing back the "word" to all of us who "don't know." But it also points up the "academicness" of radical scientists in spite of themselves. It's "more research is needed" all over again. We know that science will be different in a socialist society. Our main focus should be struggling against the mystique of capitalist science here. After the revolution it might not only be more worthwhile to go to China than it is now, but it would also be a lot cheaper. One of the stated purposes for the SESPA China trip, according to the Boston newsletter, is ". . . the hope of providing new insights as to how to combat elitism and organize scientific and other workers in the U.S." It's ironic that it should be necessary to spend some $750.00 per person to go to China to learn how to combat elitism—this shows only too clearly the elitism of a people who have the means to take those trips.

All of this leads me to believe that perhaps one of the primary motivations of those who want to make the trip is to put SESPA in good standing with China. And I do guess it's kind of groovy to be on the "approved" list.

My suggestion (in addition to the one for a study group) is to raise that same money and use it to finance technical assistance projects that really demystify science—FOR THE PEOPLE and more important, with the people. And if you're looking for ways to combat elitism, don't go to China, just ask some of the non-scientists here!

In the struggle,
Mary Lesser
Boston

HARVARD LOSES PETE BARRER

Francis Bator, Chairman
Harvard Public Policy Program
Cambridge, Massachusetts

Dear Francis Bator:

I am writing to announce my withdrawal from the Public Policy Program. This letter is being made public because the other students, professors and secretaries in the program also deserve to know why I am leaving. There are many reasons and events that have led me to this decision, but they sum to the simple facts that the Program is an illegitimate institution, that the masses of the American people and other peoples around the world would be better off if the program didn't exist, and that my further association with it will do me no good.

Despite numerous comments about the universality of use of the program's skills, it is clear to me that we have predominantly been studying policy analysis for the ruling class, the minority elite which governs in America. Who else but the ruling class, with its control over the country's resources, can afford to keep policy analysts, to shower them with computer time and unlimited xerox?

The governing elite is responsible to itself for insuring the long term maintenance of the country's institutions. As those institutions have become increasingly complex and interdependent, the ruling elite has been experiencing a rough time managing without tripping itself up. The needs of the men (there are no women) on the Visiting Committee, like C. Douglas Dillon, Benjamin Bradlee, and John Chaffee, constitute the demand for graduates of the Public Policy Program. The *problem* of public policy is how to create the conditions within which the ruling elite can maintain control over their economic apparatus and their administrative bureaucracies.

The social forces created by monopoly capitalism in the United States: exploitation, imperialism and most important, alienation, are creating the conditions for radical change, which can bring community power. A more efficient bureaucracy, carrying out the better informed decisions by the elite class of "decision-makers" cannot contain those social forces without a heavy dose of repression. Serving the men in the saddle of this runaway horse which is tearing itself to pieces is an illegitimate way to spend ones life. I have no intention of offering such service.

However, disagreement with the overall purposes of the program is not sufficient to prompt my withdrawal; I have been suspicious of the purposes of the program since enrolling. The content of the first year classes predominantly emphasizes analysis for the "decision-makers." The projects have "client orientation" (as opposed to orientation for serving the people); the second year "briefings" emphasis on role-playing a staffer to an elite "decision-maker" caters to, of course, *his* interest, not the interests of the people being "served."

Many times in the past year and a half I have kept quiet, endured an absurd indignity, or simply not complied with a program requirement, in order to remain within it. I very much dislike leaving a project before it is finished. I feel now, however, that there is no compelling reason to spend this Spring taking more courses at Harvard, to get another degree.

It is a great relief to toss off those obligations; a person can go through the motions and satisfy requirements for only so long.

You shouldn't get the wrong picture: my past time has not been entirely wasted. I have gained some understanding from the courses I've taken and the activities I have taken part in. I have made a number of friends among the students, secretaries, and faculty. But there is a time for every purpose under heaven; the time has come for me to merge formality with reality, and formally withdraw from the Public Policy Program.

Peter J. Barrer

USING PREGNANCY TESTS IN HIRING DISCRIMINATION AGAINST WOMEN OR MA BELL REJECTS PREGNANT BELLES

When my friend Steve [1]suggested that he could get me two films on pregnancy testing to show in my biology class at Boston University I was delighted. I wanted my students to learn how to do a pregnancy test but also to find about the general state of the problem today. The purpose was to show them how simple and cheap the tests really are. It is possible now to do an accurate test in two minutes and detect the pregnancy 10 days after the missed period. The test is very easy and women could do it at home for 95 cents (instead of the 6 to 12 dollars that clinical laboratories charge).

Anyhow, let's thank the Lord that quick, good tests are around. Right?Who would deny their benefit for women? Well, it turns out that just like everything else, these tests can and are being used against women. . .

One of the films that Steve gave me was called "Pregnancy testing in the 70's". It was a panel discussion between six members of the medical profession. The trend of the discussion was how important routine early pregnancy tests are, since women could go into X-ray therapy, for instance, unaware of their pregnancy with possible harmful effects to the child. However, one of the participants to the panel, Dr. Lawrence A. Pyle Jr., General Medical director (the Chesapeake and Potomac Telephone Companies) was not really concerned about the mother or the child. His concern was, believe it or not, the Telephone company.

The chairman of the panel, Dr. Elizabeth Connell from Columbia University, asks Dr. Pyle about his interest in the tests as an industrial physician. Dr. Pyle: "Well, I'm very much interested in it because we had a problem with hiring people in early pregnancy. We felt we had to overcome this and as a result we have gone to routine pregnancy testing in applicants for employment."

After a while, candid Dr. Pyle became a little more explicit: "Well, hiring pregnant women has always posed a problem for us in the Medical Department. It is even more important, I think, to supervisors who are interested in training new employees. We had to find some way to stop hiring people in early pregnancy. They would be put into training programs at a fair amount of expense and by the the time they'd finished their training and were ready to become effective employees, it was necessary for them to go off on a pregnancy leave of absence." Do the women know they are going to be tested for pregnancy?No, says misty-eyed Dr. Pyle: "We do ask the applicant for a specimen of urine, *don't tell her what we're going to do with it,* and she gives this freely to us and we test it." Is this type of screening procedure spreading among industry?Yes, he says, particularly in the Bell system, for instance in New Jersey Bell and in Southern Bell, both of which include large numbers of women employees. He adds that most of the people who come up positive in the tests were trying to hide their pregnancies. He has been doing this job for a year, tested 2000 female applicants, and uncovered 38 pregnancies. He has saved the company about 27,000 dollars.

By the end of the film [2] I was shaking. The wonderful 2-minute test glowed like a diabolic invention. Those 38 women (and how many more since then?) apparently knew they were pregnant and they went to look for a job. But Dr. Pyle was there, to "save" money for the company. Does the money he saves even cover his salary?

That the medical profession openly discriminates against women, is not hot news anymore. What is peculiarly striking in this case is that recent technological advances, supposedly developed to help women, are openly being used against them.

For instance, in March 1970, The FDA announced its intention to require all oral contraceptive manufacturers to enclose a 600-word warning of hazards in packages going directly to the patient. This was violently opposed by the physicians and the drug houses on the ground that it was violating the supposedly sacred doctor-patient relationship. The AMA considered any direct communication between the agency (a 3rd party) and the women as an intrusion. There was even talk of a legal action against the FDA.

Again, that a patient is the private property of her doctor, no hot news. Except, that when the motive is clear-cut straight economic profit and the third party is the Telephone Co., nobody seems to mind. Which made me wonder about the whole field of so-called "industrial medicine". Surely this is no isolated case. Doctors check people for maximum efficiency at work, patch them up quickly to send them back to assembly lines, and expose those hard-core criminals: pregnant women looking for a job. The role that physicians play in the context of a factory or of a company shows rather clearly whose interests they serve.

Which all boils down to what we already knew: that scientific and technological progress can not be separated from the applications which it is going to be put into.

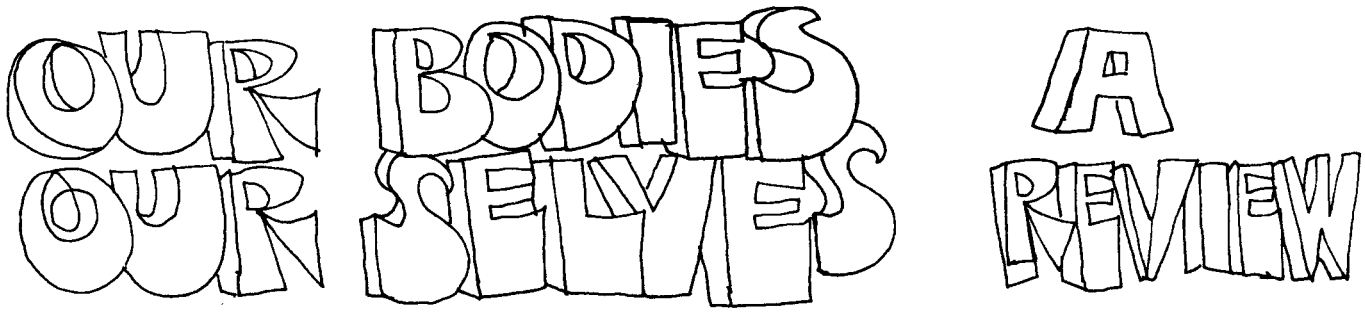
Thank you so much, Dr. Pyle, for furnishing us with such a fine example of advances in technology to the service of economic oppression.

R.A.

1. Steve does pregnancy tests at the Pregnancy Counseling Service, 5 Joy St., Boston. for $3.00
2. 16 mm., 30 minutes, color, can be obtained from Organon Inc., 375 Mount Pleasant Avenue, West Orange, New Jersey, 07052.

FINAL FOOTNOTE FOR DR PYLE

Dr. Pyle candidly discusses his work for the Telephone Company in Journal of Occupational Medicine, *vol. 12, no. 1, pp. 26-27, Jan. 1970.*



OUR BODIES OUR SELVES [1] strikes out against the myths about women that help maintain the position of women in this society. For example, there is the myth that the basic social and psychological needs of women are determined solely by internal forces, that is, by their biological inheritance. The ideology that oppresses women manifests itself in almost every institution of American society and every avenue of American life, from the schools which assume that young women are more suited (psychologically, of course) to study nursing than medicine, to the cosmetic advertising which frightens them with visions of a life barren of sexual fulfillment if anyone but their hairdresser knows for sure.

The oppressive set of myths that make up a large part of this ideology can survive only so long as women remain ignorant of their physiology, of the commonness of their psychological suffering, and of the role that the ideology itself plays in influencing them to accept their oppression (indeed in often preventing them from even being aware of its existence). *Our Bodies Our Selves* has an impressive amount of basic information about women's bodies. It also talks about the pressures of society on women—but not through laboratory studies. We read the personal experiences of many individual women.

But it does much more than merely to provide information. Liberal muckrakers are forever providing dismal information, exposing corruption, brutality, calculated lying by high government officials, etc., etc.,—leaving their readers overwhelmed by how bad it all is, how hopeless, and despairing of any possibility for bettering life, and succumbing eventually to cynicism. This book leads women not to despair, but to feel pride in themselves as autonomous human beings, to experience a sense of unity with each other, and to realize the potential for revolutionary social change that their coming together will provide. It helps each of us take the first step in building this unity—that of learning about ourselves and each other, and the rich possibilities inherent in working together.

It was in the struggle against their own oppression that a group of ordinary women created this extraordinary book. *Our Bodies Our Selves* is extraordinary not only because it is excellent—though that alone would give it unusual status—but because it was *not* authored by an "outstanding" woman doctor or physiologist. In fact, it is unlikely that it could have been written by any one person. It is based upon the experiences of many women, and was created by the collective effort of about two dozen of them, the members of the Boston Women's Health Course Collective, hereafter called the Health Collective. They describe the book as "a course by and for women."

Possibly even more important than the content of the book is the process by which it was made (a process that the book illuminates very well) and the fact that its authors included no experts, no specialists, no professionals. Elite professionals (i.e. most professionals) would regard them as "unqualified" for the job, for it was no minor task to tackle

the body of knowledge they sought (and still seek) to encompass in their work. To realize that ordinary people can demystify knowledge and use it as a tool for liberation is to see the revolutionary power that lies in each of us. And this vision is itself a potent force. It unleashes our energies as nothing else can because it is a vision of totally unalienated labor. It inspires us to join the process. The authors describe that first awareness, (p.1)

. . . several of us developed a questionnaire about women's feelings about their bodies and their relationship to doctors. We discovered there were no "good" doctors and we had to learn for ourselves. *We talked about our own experiences and we shared our own knowledge. We went to books and to medically trained people for more information. . . We picked. . . [topics] we wanted to do and worked individually and in groups to write the papers.* The process that developed in the group became as important as the material we were learning. For the first time, we were doing research and writing papers that were about us and for us. We were excited and our excitement was powerful. *We wanted to share both the excitement and the material we were learning with our sisters.* **We saw ourselves differently and our lives began to change.** *(Emphases added.)*

Their book is an exemplary movement effort in many ways. The price, 30 cents or less [1], has nothing to do with its intrinsic value to people, but reflects rather its cost of production. The cost was held minimal by making the book strictly utilitarian. One hundred and forty pages of newsprint, roughly 8 and 1/2 by 11 inches, bound together by three heavy staples, with the cover also newsprint, it is not a technical masterpiece—not a book you can be "proud to own." Its spirit is symbolized by the photograph on the cover of three women, one of whom is under 16 years of age, another of whom is over 60, holding a hand-lettered sign that says simply, "WOMEN UNITE." Alive with the women who wrote it, it is always compassionate. Unquestionable is the total honesty of the women authors with each other—and with us. One finds no semantic tricks, no jargon, no aping of academics, no euphemisms. Deprivation is called "deprivation", not "underprivilege".

Moreover, the clarity of their political and social analysis is not lessened by the bitterness of personal experiences. Doctors are a case in point. A woman (or man) in need of a doctor's attention is particularly vulnerable; is at the mercy of the doctor in whose hands she places herself for treatment. Again and again doctors, almost all of whom are male, are

criticized: for their dehumanizing treatment of women as objects instead of people, for their ritualistic lack of candor with the patient, for their assembly-line methods, for their avarice—in short, for making the Hippocratic oath into a hypocritic oath by the conduct of their professional lives. The women correctly see doctors as a class of people who oppress them, yet to their credit they also see doctors as individual victims of the social order: (p. 65)

The individual doctor does not break out of the system because he has been forced to work hard for sub-standard pay for many years, and just as he starts to make more money, which he has come to think is his due, he doesn't dare risk his job by performing abortions or by urging his hospital to allow more of them.

And later on, (pp. 128-129)

Doctors are doctor chauvinists as well as male chauvinists. . . Medical schools teach their students. . . to occupy an exalted position in the medical world (and society in general). . . Doctors go through a greater socializing process than even the priesthood. For at least seven years they spend most of their waking hours not only absorbing medical information, but learning how to act and think as well. Thus the social order. . . is established.

Medical schools are maintained as elitist institutions by their high tuition and the almost total lack of federal aid for scholarships to medical schools. . . The students are mainly from well-off families. . . The AMA [American Medical Association] *has fought hard to maintain this* status quo.

The ability to distinguish among one's oppressors, and to understand which of them are themselves victims of the social structure, is an important part of revolutionary consciousness.

Nor are men seen as enemies. The authors are not out to teach men or to "trade places" with them. In one of the very rare passages (perhaps the only one) directed to men, they write: (p. 24)

To any men who happen to read this: This pamphlet was not written for you. . . please do not suggest to your girl that she read it. If you want to change your behavior and you are living together, you might start doing half the housework. . . In the long run you should try to change your own life, and the society, so that you can be pleased with and proud of yourself without having to exploit her. For either of the sexes to be free, both you and she must be leading worthwhile lives. . .

The goal of this pamphlet, and of the Women's Liberation movement, is to help us move towards a world in which human relationships can be more free, more satisfying. This means freedom from class and racial oppression, and it means freedom for all from want and from alienating work. . .

This pamphlet. . . ought to be the beginning, for us, of a revolution.

The book, for it *is* more a book than a pamphlet, consists of a brief introduction to the health course, and eleven chapters, each written by one or several of the women in the Health Collective. The chapter titles are: Anatomy and Physiology; Sexuality; Some Myths about Women; Venereal Disease; Birth Control; Abortion; Pregnancy; Prepared Childbirth; Post Partum; Medical Institutions; Women, Medicine, and Capitalism.

The book is crammed with factual information that *everyone ought to know.* For example, in the twenty-odd years since the Chinese revolution, "syphilis has been completely ended." (p. 37) "This was done by giving a blood test to almost everybody. Consequently, everyone found to have syphilis was adequately treated and syphilis is no longer a problem." (p. 34) "What about in the United States? In this country. . .[there are] about. . .300 new cases of syphilis every day. Approximately 4000 people each year die in the late stage of untreated syphilis." (p. 37)

Thus the book cries out, ALL KNOWLEDGE TO THE PEOPLE! The authors know that knowledge is the prerequisite to the power they need in order to take control of their own lives. And they invite all women to join in their effort—to make the course a living experience for all women-- to expand and enrich it by adding each woman's thoughts and knowledge to theirs. They write: (p. iii)

The first printing sold so fast we haven't had time to revise the printed course. We are working on revisions which we hope will be ready for the 3rd printing. We want to add chapters on menopause and getting older and attitudes to children (child rearing alternatives, single women having children, adopting, also *not having children). We want to expand the existing chapters to include more on monogamy, homosexuality, women's diseases and hysterectomies, the relation between mental and physical health, nutrition, etc., etc.*

Would you like to make suggestions, write up your own experience, or otherwise work on the course? Please write us. The course is what all of us make it. [2]

In a larger sense, what the book says to us—all of us, women and men—is that our lives are what all of us, collectively, make of them, and that we can, and ought, join together to make them better.

G.S.

1. *Our Bodies Our Selves,* a course by and for women. First edition, 5th printing of *Women and Their Bodies,* March 1972, iv+138 pp., prepared by the Boston Women's Health Course Collective. Available from the New England Free Press, 791 Tremont St., Boston, Mass. 02118. Individual copies $.30+$.15 for postage; 2-9 copies $.30 per copy; 10-49 copies $.28 per copy; 50-199 copies $.25 per copy; 200-499 copies $.22 per copy; 500+ copies $.20 per copy; to people distributing copies free $.10 per copy for all copies being distributed free. Price for 2 or more copies includes postage.
2. You can write the authors at: Boston Women's Health Book Collective, Box 192, West Somerville, Mass. 02144.

REPORT FROM THE CHINA COLLECTIVE

Early this year a group of people from the Boston chapter of Science for the People began discussing a SFP visit to the People's Republic of China. A proposal has been made to the appropriate agencies in China and notice of our intent has gone out to other SFP chapters around the country. We have been meeting regularly to explore why and how such a trip should take place. We've put together our ideas informally in order both to widen the base of the trip and to get more feedback from SFP people nationally.

Several scientists have already visited China, and more will surely follow. Why a Science for the People trip to China? Although exchange of technical information between the people of China and the United States are to both our advantages, clearly a SFP trip would be politically motivated. The aims of our trip would be different from those of the usual scientific visit.

Most of us in the Boston group have been involved with radical political organization in the scientific and non-scientific communities for some time. Our goal has been to build revolutionary movement in the schools, universities, and laboratories where we find ourselves. While we seek through many projects to redirect and restructure science to serve the people, we recognize that the kind of changes we seek can only take place within a thorough reorganization of our entire society from a capitalist to a socialist base. Therefore much of our attention is directed toward the social and political context in which capitalist science is practiced, and how it functions to restrict scientific benefits to a small sector and keep it from serving all of society. A particularly destructive aspect of this is the gulf between the elite producers and the consumers of science, the way science managers manipulate those differences, and the organizational and cultural changes needed to eliminate this division.

People all over the world have been led to confront these questions. China, as a revolutionary socialist society, is one place where concrete solutions are being tested. Seeing what "revolutionary change" actually means to a people can be very important to Americans who only discuss such change theoretically or read about it in books. Of course, we in America are going to have to develop our own solutions for our own problems. The Chinese model could hardly be transferred intact to our situation. Nevertheless, we feel that there is much to be learned from first-hand observation of their struggle, to see how they deal with questions such as: How are the technical needs of the Chinese people assessed and articulated, and how is this information passed on to the scientific sector? What are the criteria and the mechanisms for making decisions about the relative value and the priority of one scientific project over another? How is scientific research organized and carried out at the work place? What is the relationship between workers at different levels in the same work place? What role does science education play in preparing people to participate in the control and production of scientific work? And so forth. These are questions that we are already dealing with here in the United States in our effort to make science serve the people. What we know about science in China suggests that we would profit from studying the solutions that the Chinese people have developed for their conditions.

There are other potential benefits to the trip. For the people who go, the experience may well have a serious impact on personal outlook and on future energy and dedication to the movement. This was the case, for example, with one member of our group who has already been to China, and with a radical teachers group which made a similar trip to Cuba two years ago. Preparations for the trip can contribute to the political education and development of those who take part, whether or not they go. Since the delegation will be national, contacts with Science for the People will be improved, and subsequent organization might be facilitated.

Although we don't mean to inflate the importance of what we can learn from the Chinese, this information can be useful in several ways for our organizing efforts here when we return. Having a concrete example to describe should give us access to a relatively wide audience in scientific meetings, schools, both radical and liberal political groups, and so on. Then we can discuss the Chinese situation in the context of revolutionary change in America, the political perspective of SFP, and the role of science in society.

We hope that people will be chosen for the trip from SFP or similar groups across the country by collective self-selection. The criteria that would seem most important are a demonstrated commitment to political organizing in the scientific sector in the past, and a major committment of time and energy after returning to using the experience of the trip, to organize around the concepts of Science for the People. Funding the trip may be a problem. We intend to try to raise the money on the basis of the trip's political content, being careful to solicit sources that are not already supporting other ongoing SFP activities.

People who are interested in going to China, in helping preparations, or in telling us what you think about the project should write as soon as possible to the China Collective, SESPA, 9 Walden St., Jamaica Plain, Mass. 02130, or call Dan Connell at (617) 868-7572.

SEE LESSER LETTER PAGE 4

CHAPTER REPORTS

REPORT FROM BERKELEY

We have been very slow in writing up reports on the San Francisco APS meeting for Science for the People. Here is what I can give you now.

Bob Cahn has written up a piece on the Job Crisis. It ends with a "threat" that if the APS Council does not propose a satisfactory plan of action by the Washington meeting (end of April) then there should be "No Business as Usual". Just what action that implies is purposefully ambiguous; and it will depend on the people who plan to go to Washington to decide how to implement this. I hope you can help disseminate the word and plan some appropriate action against the physics "ruling class" over this issue.

Perhaps you can do a review of the *Physics Free Press* which appeared from unknown sources but made a very strong impression on all APS'ers.

While the job crisis for young physicists was the most pointed issue at the annual APS meeting in San Francisco this winter, there were a number of other issues which came up for solid discussion, both as part of the scheduled program and as SESPA augmentations. The new Forum on Physics and Society, part of the APS, made its debut with an overflow crowd coming to hear biologist Paul Ehrlich talk on population and ecology. Ehrlich was more showman than scientist in talking about ecology, and he continued his ego-filled debate with Barry Commoner over whether "population" or "technology" is the major cause of pollution. Ehrlich's audience of mostly straight physicists was very strongly impressed by the program's first speaker: Maurice Bazin, who spoke on Physics and the Third World – a powerful analysis and indictment of how American science has been exported more to enslave the underdeveloped countries than to help them. [See Bazin's article in this issue.]

An APS panel discussion on "Uses of Physics" presented physicists from AT&T, General Motors, and Xerox Corp. showing what "Uses" of physics their employers were most interested in; and they were joined by the notable physicist M. L. Goldberger (former Pentagon advisor, present member of IDA, Professor at Princeton and Chairman of the Federation of American Scientists) who explained how academics can help produce the kind of properly educated scientists that can be profitably "Used" by corporate and governmental employers. Goldberger showed his liberal colors by needling the GM representative about air pollution from automobiles. GM reply: We are doing studies in mass transportation because if this ever becomes the dominant mode of travel, then GM wants to be on top of it. !! However, when asked about his contributions to the Vietnam war, Goldberger became very defensive.

In terms of mass events, the highlight of the meeting was the appearance of Richard Feynman to receive the Oersted Medal (for outstanding contributions in the teaching of physics). The SESPA leaflet which protested Feynman's sexist book was widely distibuted, and when Feynman rose to receive his award before an audience of 2000, he was greeted by a group of picket signs which surrounded the podium. His response was mixed. He forcefully and publicly denounced the practice of sexism; but he said that it was stupid for us to pick on his textbook; moreover, as expected, he refused to consider removing the offending passages. SESPA chose to keep the protest at a low key, and it was undoubtedly successful in that the issue of sexism (perhaps more pernicious in physics than in any other science) was raised to a higher level of consciousness in the minds of more people than has ever happened before.

Perhaps the most significant new issue to come up at this meeting was the discussion of William Shockley, the Nobel Prize winning physicist, who has been busy promoting his racist–crackpot theory that Blacks are genetically inferior in intelligence. People from SESPA, together with people from PLP, presented a resolution at the APS Business Meeting. APS President, Robert Serber, ruled it out of order, saying that this was not proper business within the purpose of the APS. His ruling was challenged from the floor, and a heated debate followed. Radicals argued that the professional society could no longer hide from its responsibility to face this issue, and, significantly, some members of the APS Council spoke and voted against Serber. A group of Black physicists took an active part in the debate. With perhaps a hundred members present, Serber was overruled and the anti-Shockley resolution was overwhelmingly approved. Member votes, however, are only advisory to the APS Council. In the past the APS Council has tried to avoid issues as controversial as this. The matter will probably come before the Council at their meeting in Washington at the end of April. It is important that APS members write or speak to members of the Council, urging them to approve this resolution. We hope that concerned members of the APS on the East Coast can attend this meeting. (Professor P. M. Morse at MIT is now President of the APS and will know when this item is scheduled for action by the Council.)

Also: Please send us 150 magazines each two months instead of 75–also 50 buttons.
ALSO: We are pursuing the Shockley thing on this campus and getting involved with larger issue: Jensen and Herrnstein. Please send any more information and analysis that you may have.

C.S.

REPORT FROM ST. LOUIS

Here is our brief report from the St. Louis front. I don't have a lot to say, but a couple of items deserve mentioning. The McDonnell Project is being covered in a separate report which you will receive shortly, or which I will enclose with this letter if I get it in time.

(1) The St. Louis Ecology Group is preparing for publication of materials on the automobile: its politics, ecology, and economics. Our main focus is on the many ways in which the U.S. committment to private automobiles as the major form of transportation is geared to maximize profits and not to meet human needs throughout the world. The auto and its related industries, especially oil, consume enormous amounts of the worlds resources to provide an inefficient means of transportation for a tiny segment of the world's population. We are trying to show how capitalism ravages the environment by exhausting valuable resources to produce goods that bring profit.

Countries which supply the U.S. corporations with oil, magnesium, cobalt, nickel, and other raw materials for automobiles might want, rationally, to use those materials to produce trucks and tractors. But the U.S. corporations control the raw materials, and they are used to make luxury items for affluent Americans. The auto industry exploits third world countries by exhausting their natural resources, it exploits workers at home by subjecting them to tedious, unhealthy, and unsteady working conditions, and it exploits consumers by building poorly engineered products, and by opposing the introduction of more rational means of transportation (i.e. rapid transit, monorails, etc.). Our aim is to make the automobile a case study in how capitalism exploits and controls much of our daily lives.

The form of this publication will be first a detailed book, then a series of pamphlets dealing with specific aspects of the problem such as the industry's relation to its workers, the auto and imperialism, and how auto pollution affects most seriously the health of the inner city poor. We hope to complete the larger book by June, 1972.

(2) A radical sociologist at Washington University has moved into what may be called the third round of his battle for a fair and open hearing on his tenure case. Over a year ago the department voted by a narrow margin to grant tenure. In making that decision questions about Colfax's involvement with various community groups, and especially the Black Panther Party in Connecticut (before he came to Washington University), were raised. The department's vote of 5-4 was called by the Administration "not sufficiently strong" and the department was asked by the Dean to vote again. This time the vote was negative (4 against, 3 for, and 2 abstentions). Late in the spring Colfax asked for an AAUP-type hearing on the matter, claiming that some of his publications were not included in the file that circulated among department members, and that political questions had influenced the department's vote. This fall the university convened its "informal" committee which considers all faculty personel problems. This is a three-member committee (the AAUP committee for hearing tenure cases is supposed to be a 9-member committee), which conducted "informal" hearings (i.e. no transcript, and limited witnesses). Washington University has never adopted the AAUP recommendations on tenure questions, and thus felt no compulsion to follow its procedures. The informal committee decided last month that no academic freedoms had been violated in the Colfax case, and recommended to the Chancellor that no further investigations were necessary. Colfax countered by claiming that political considerations were at the heart of the department's desire to get rid of him. Active in community lead-poisoning work, and with welfare mothers, Colfax had been trying for some time to put his sociology into practice in the community. He had claimed that traditional academic sociology should be discarded and a new activist brand substituted for it. Undoubtedly these views, coupled with his spending a considerable amount of time helping organize people in the community, led colleagues to view his scholarly commitment skeptically.

The Chancellor has now acceded to a "formal" AAUP-type hearing, although not agreeing to all the AAUP details. Although the faculty is considering adopting the AAUP regulations, the Chancellor refuses to allow Colfax's hearing to be postponed until those regulations can be put into effect. Thus, the Chancellor has asked the Faculty Senate, an elite body of established professors, to pick a 9-man committee (AAUP recommends that the 9-man committee be chosen from the faculty at large) to give the case a formal hearing. Whether the hearing will be open or closed is not clear, but a transcript *will* be made. Colfax's proposal of a 9-man committee composed of three whom he selected, three whom the Faculty Senate selected, and three chosen by the Other six, was rejected. Although it seemed like Colfax had won a victory by the Chancellor's decision to hold a hearing, in reality, this was just another move to go through the forms of justice without the substance. Not only is the selection of the committee unfavorable, but the outcome of the hearing has been left purposefully unclear. If the committee finds that Colfax's academic freedom was actually denied, it is not clear whether they will reverse the sociology department's decision, or whether they will simply send the matter back to the department. The former would be a victory; the latter only chaos added to confusion. What's more, the Chancellor explicitly stated that the 9-man committee was *not* to deal with the question of Colfax's academic competence—only with whether his academic freedom had been violated. It should be obvious that the latter cannot be investigated without dealing with the former.

This case has illustrated a great deal about how decisions are made at this (and other) universities. It has shown the subtle ways in which those who try to serve the people are dealt with by the established power structure. What Dave Colfax has called for is a new method of practicing sociology, one that emphasizes involvement with real community problems, with organizing, and helping people meet their own needs. This has of necessity meant that he spends less time publishing weighty papers—though he has published considerably even by traditional standards. His approach is a threat to those who would use their academic position to

avoid dealing with the community's immediate problems. Thus, they claim publically not that Colfax has politics they don't like, but that he "hasn't measured up" to their standards.

G.A.

THE MCDONNELL PROJECT

McDonnell Douglas is the largest employer and most profitable corporation in St. Louis. It is also the largest war contractor in the United States—since 1966, McDonnell got more than twice as much in war-related contracts as the next largest contractor. It produces the Phantom F-4 and F-15 fighters being used in Southeast Asia and in the Middle East.

People in St. Louis are beginning to understand the many ways that McDonnell affects their lives and the lives of people throughout the United States and the Third World. The McDonnell Project is beginning to build a movement based on the principle that the people who's lives are affected by decisions should be able to make those decisions, and an understanding that it will not be possible for people in St. Louis or anywhere else to live decently until they, and not just a small group of powerful rich people, control McDonnell and corporations like it.

The project has made a film in which people who work at McDonnell and Vietnam vets talk about what it is like to work at a company like McDonnell, about the problem of layoffs, about the kinds of work they would rather do than producing military aircraft or spacecraft, and about what the planes that McDonnell makes do to people in Southeast Asia.

The McDonnell film is a political documentary about the effects of the aerospace industry in general. It consists entirely of interviews with people who have had some kind of working relationship with McDonnell Douglas Corporation or its products. The film runs for 27 minutes, is in black and white, and rents for $30.00. Sale price is $200 (but negotiable). For information get in touch with:

The St. Louis Project
4372 Westminster Place
St. Louis, Missouri 63108

REPORT FROM NEW YORK CITY

Scientists in New York City have engaged in two main projects recently—occupational health and safety, and medical and technical aid to Indochina. A detailed report on the occupational health and safety is given in another article in this issue. Scientists who taught the OCAW course at Rutgers this fall are now preparing a shortened version of the course for presentation this Spring. Members of the United Auto Workers have expressed particular interest in the course, and it will be oriented more toward the types of hazards they face, such as welding, paint and metal dust fumes, noise, etc. The course begins April 3 at the Rutgers Labor Center. All those interested in attending and participating in the course should contact Dave Kotelchuck or Jeanne Stellman (addresses at end of occupational health article).

Also Computer People for Peace (CPP) and the New York chapter of the Medical Committee for Human Rights (MCHR) are engaged in projects involving technical and medical aid to Indochina. Members of CPP heard mathematician Chandler Davis speak last fall about his trip to Vietnam and China, and were told of Vietnamese requests for information concerning computer uses in this country. Areas of interest are operation and management of small and medium size computers, and applications of computers to process control, medicine, city planning, and economic planning. CPP recently wrote a letter to Mr. Nguyen Ngoc Hoang in Hanoi asking for further details. Those interested in helping CPP on this project should write CPP, The Dolphin Center, 137A W. 14th Street, New York, New York, 10011.

New York MCHR is presently beginning a project on medical aid to Indochina. Members have recently been visiting interested groups at medical schools and other health institutions, discussing the war and passing out detailed descriptions of medical needs. Also the group has been presenting a slide show, developed by NARMIC, on the electronic battlefield in Indochina. For more information contact Medical Aid for Indochina, New York MCHR, 137A W. 14th Street, New York, New York, 10011.

D.K.

REPORT FROM SANTA CRUZ

As a relatively new collective (begun in October, '71), we have so far chosen to put most of our energies into Science for Vietnam. While this has been our heaviest emphasis, there is a growing movement among us to broaden the scope of our activities. Our present membership is drawn from the Santa Cruz community and the University, the latter mostly undergraduates with some faculty.

We have developed a wide variety of Science for Vietnam projects, ranging from rather technical to completely non-technical. This wide range reflects accurately the composition and interests of the group, from those of us trained in the sciences through those whose experience is rooted in in the humanities to those

the humanities to those who have not yet selected some area of specialty.

Our function, we believe, is three-fold:

(1) to give direct aid to Hanoi and the Provisional Revolutionary Government of South Vietnam

(2) to offer a way for people who oppose the war to directly and positively express that opposition

(3) to educate ourselves and others of our community both about the specific nature of the war and the economic basis of that war.

Based on these goals, we have selected the following projects which have had varying degrees of success:

(A) *BZ Gas.* An effort to identify the chemical structure of this nerve gas and to develop both a field detection and a detoxification procedure. We've thoroughly searched the literature, sent for the relevant patents and have laboratory facilities available to us. Although we've tentatively identified the structure, it would really speed up our efforts if we could get a sample of the gas.

(B) *Cultural Exchange Project.* The Vietnamese in Hanoi suggested (to our surprise) an exchange of cultural materials including political and other mass media publications, samples of contemporary music and art, etc. They've offered to send several Vietnamese publications in English regularly: *Vietnam Courier, South Vietnam in Struggle* (NLF), and *Vietnam Studies.* They are also interested in finding outlets for Vietnamese records to help create understanding and solidarity between the peoples of their country and ours. Our goal is to establish a Vietnamese Center in the community here, where these materials can be made available. We have sent our first package on mass media (political) and our next one will focus on women's liberation.

(C) *Psychological Warfare.* We've encountered real difficulty in responding to this request. Hanoi has asked that we identify the current trends of psychological research in this country. The results of having searched through the abstracts of government research (unclassified; classified through 1967 when TAB was discontinued) were disappointing. We've asked Hanoi for more specific questions, but we need help from anyone here who might know possible information sources.

(D) *Educational Packets.* Hanoi has requested material in all academic fields for use at the beginning college level. We've decided to respond to this by selecting individual subject areas and assembling a collection of several good general texts, significant journal articles (xeroxed), etc., accompanied by a subscription to a journal relevant to the selected subject. Our first packet is on general Ecology. The Bay Area Institute is involved in a similar project and we are coordinating with them (see below).

(E) *Research Directions in Crop Pathology.* A literature search to determine the trends of this research as well as the researchers and institutes engaged in it, focusing on rice and soybean disease research.

This is a new project and will involve sending xeroxed journal articles.

In addition to making the community here aware of the above projects, we have undertaken several educational programs:

—*E.W. Pfeiffer* (Zoologist, U. of Montana) presented a slide/film talk on his research to the campus and the community, entitled "The Ecological Devastation in Indochina". His presentation was well-covered by the local media (newspaper, TV, radio) and it greatly aided our efforts here, including building our own membership. We strongly suggest that others make use of Pfeiffer's materials and experience, and his willingness to assist in building Science for Vietnam projects.

—*Banning Garrett* (Bay Area Institute, SE Asian Ed. for *Ramparts*) reported on his January trip to Hanoi, including his interviews with POW's and discussion with the Vietnamese about political strategies of the movement here. Garrett urged groups interested in sending material to the North Vietnamese to make use of the following forwarding address which has proven reliable. Also, groups without postage funds are encouraged to mail their material to the Bay Area Institute for forwarding to Hanoi.

Bay Area Institute	Pham Duong
Project Tri	29 Havelska
Suite 300	Prague 1
9 Sutter St.	Czechoslovakia
San Francisco, Calif.	

One of the recurrent difficulties we have had since the beginning of the project has been to find ways to tie in the activities in direct support of the Vietnamese with organizing within the local community. The Vietnamese have made clear (through B. Garrett) the critical importance of the 1972 Presidential elections to them in their struggle. If we are to respond adequately to this concern expressed by Hanoi, our activities must be directed not only at the policies carried out by Nixon but at developing issues to expose the whole economic and political basis for the US presence in SE Asia. With this in mind, we're attempting to develop a coalition which includes these major activities:

—the Science for Vietnam projects described above

—research on local war-related light industry

—guerilla and street theater basically focused on issues such as the myth of winding down the war.

We hope this description will be useful to collectives in other contexts around the country, and we want to be in contact with any who want to join us in one or more of them.

Santa Cruz Science for the People Collective

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help move the unions into areas they have often neglected, but it can help enlarge the workers' sphere of control in the plant. By monitoring the work process and, if need be, forcing modification of it, workers begin to encroach on management's "right" of control over working conditions inside the plant. And this may be the seed of worker control over the entire work process, looking toward the day when all institutions of society will be controlled by those who work in them and by those who are serviced by them. Thus occupational health struggles can be an important transitional step toward restructuring our society.

Finally, for those who recognize that a neutral science doesn't exist in any society, work in occupational health and safety represents a step away from science in service to government and industry, and a step toward science for the people.

D.K.

1. "Occupational Disease. . . The Silent Enemy," a pamphlet published by the Public Health Service of the U.S. Department of Health, Education, and Welfare. Available free from the National Institute of Occupational Safety and Health, 5600 Fishers Lane, Rockville, Md. 20852.
2. *Occupational Hazards,* October, 1971, p. 55.
3. *Strategy for Labor,* by Andre Gorz, Beacon Press paperback, 1968, Boston, Mass.
4. *New York Times,* February , 1972, p.1

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Medical Committee for Human Rights
710 S. Marshfield Avenue
Chicago, Illinois 60612

Labor History and Strategy:

Labor's Untold Story, by R. Boyer and H. Morais, published by United Electrical Workers Union, 1955, 11 E. 51st St., New York, N.Y.

Strategy for Labor, by Andre Gorz, Beacon Press paperback, 1968, Boston, Mass.

"Which Side Are You On–Trade Unions in America," by Stanley Aronowitz, *Liberation Magazine,* December 1971.

"Prospects for the New Left," by Staughton Lynd, *Liberation Magazine,* January 1971.

Technical Aspects of Occupational Health and Safety:

"Fundamentals of Industrial Hygiene," by the National Safety Council, 425 N. Michigan Ave., Chicago, Ill. 60611 ($10)

"Industrial Hazards: A Worker's Guide for Controlling the Work Environment," by Scientists Committee for Occupational Health, published by OCAW, Citizenship-Legislative Department, 1126 16th St., N.W., Washington, D.C. 20036 ($5). (A revised, more up to date version will be published in the near future.)

"Dangerous Properties of Industrial Materials," by Irving Sax, Reinhold Press, 1968

"Diseases of the Occupations," by Donald Hunter, Little-Brown Publishers, Boston, Mass., 1969

Occupational Safety and Health Act of 1970:

"Occupational Health and Safety Standards" from the *Federal Register,* v. 36, no. 105, Saturday, May 29, 1971. Order free from U.S. Dept. of Labor, Occupational Health and Safety Administration, Washington, D.C. 20210.

"A Unionist's Guide to the Occupational Safety and Health Act of 1970," by Urban Planning Aid, 639 Massachusetts Ave., Cambridge, Mass. 02139 ($.25)

THE INSURGENT SOCIOLOGIST

William Domhoff: Some Friendly Answers to Radical Critics.
Richard Flacks: Towards a Socialist Sociology
Marlene Dixon: Academic Roles and Functions.

The Insurgent Sociologist is published by the NUC-Radical Sociology Caucus
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SCIENCE FOR THE GENERALS EMPLOYMENT FOR THE ENGINEERS FOUR MORE YEARS FOR THE PRESIDENT

Nixon has ordered the Government to take on a $5.5 billion extravaganza: the Space Shuttle. He announced the program in California, where scientific workers are out of work. The subheadline in the New York Times proclaimed "50,000 Jobs Seen" and further down we learn that half the jobs will be on the West Coast.

It's even gonna be cost-effective!!! The Government figures it will be tossing up so many military, weather and all other kinds of satellites, at the rate of 56 shuttle flights a year, that by only 1990 it will have "saved" $14 billion.

Creation of this project is reminiscent of JFK's decision to pump the economy by building the shuttle's predecessor toy, the Trip to the Moon. Neither JFK nor Nixon could get money for anything else from Congress, even if he wanted to. Highways are choking with cars, cities are choking with unliveable apartments, and the President is compelled to build a Space Ship to get the engineers in California back to work so he can get elected to preside over the irrational disorder called the United States for another four years.

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SUBSCRIPTIONS TO *SCIENCE FOR THE PEOPLE* AND MEMBERSHIP IN SESPA

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

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

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

I am a member (check here if subscriber only. [ ])

1. Name:

   Address:

   Telephone:

   Occupation:
   (if student or unemployed please indicate)

   If you are working, do you work in industry [ ], government [ ], university [ ], other _____ .

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

3. I am enclosing money according to the following scheme: (a) regular membership–$10, (b) indigent membership–less than $10, (c) affluent or sacrifice membership–more than $10, (d) completely impoverished–nothing, (e) I have paid already.

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

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

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

SEND CHECKS TO: SESPA, 9 WALDEN ST., JAMAICA PLAIN, MASS. 02130