SCIENCE FOR THE PEOPLE

VOL. IV
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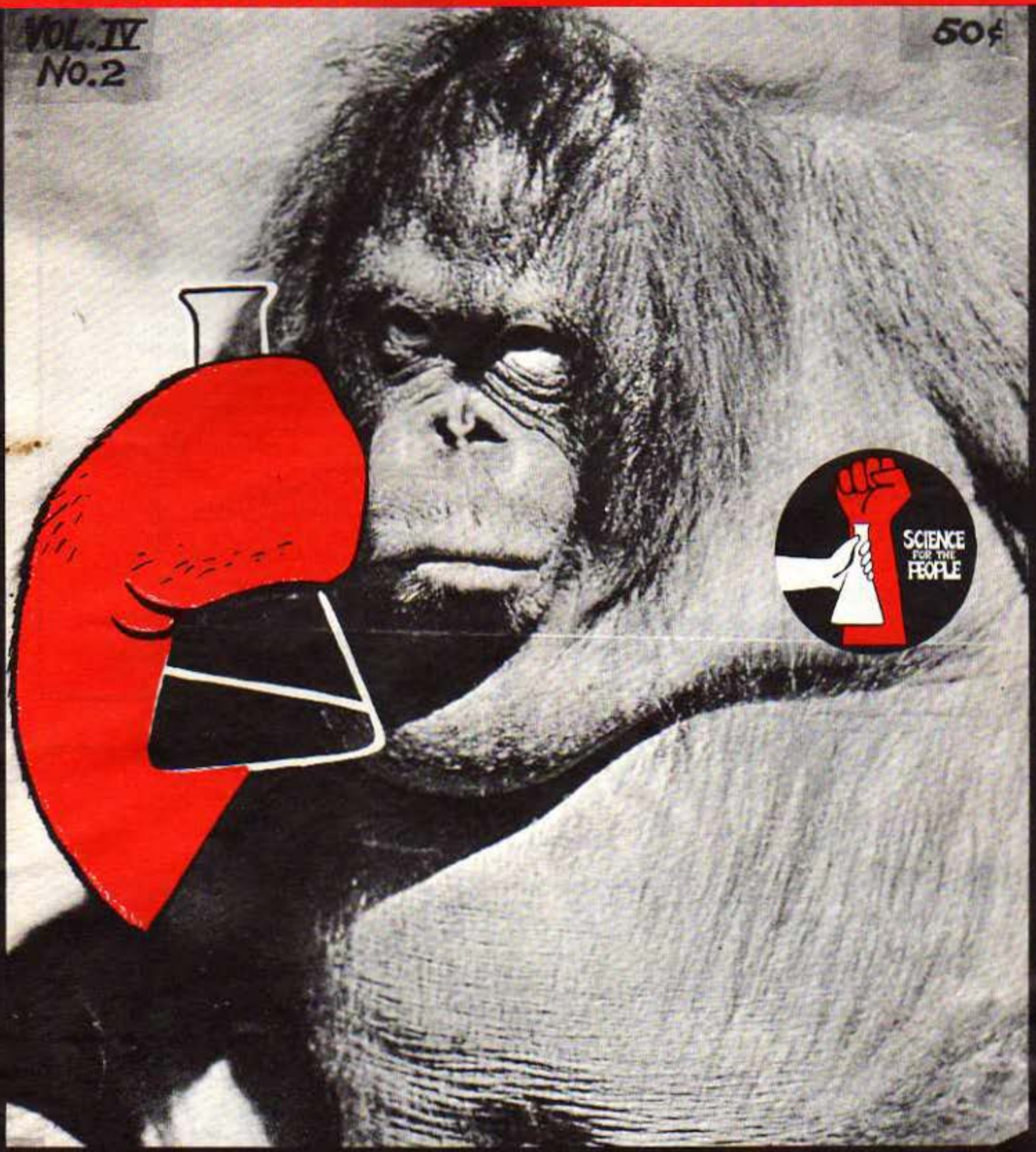

BI-MONTHLY PUBLICATION OF SCIENTISTS AND ENGINEERS
FOR SOCIAL AND POLITICAL ACTION · SESPA MAR. 1972

INSIDE

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DESIGN AND LAYOUT: Alphabet

ACTION ACTION ACTION

Plan and participate in Science for the People activities at the following events:

March 30-April 2: STUDENTS FOR A DEMOCRATIC SOCIETY national convention to fight racism, Harvard University, contact (617) 427-0642.

April 7-10: NATIONAL SCIENCE TEACHERS' ASSOCIATION annual meeting, New York, contact Jon Beckwith (617) 868-3143 or (617) 734-3300 ext. 681.

April 9-14: AMERICAN CHEMICAL SOCIETY meeting, Boston, contact Joe Richmond (617) 868-8364 or (617) 495-4034.

April 24-27: AMERICAN PHYSICAL SOCIETY spring meeting, Washington, D.C. Sheraton-Park, contact Dan Adkins (202) 547-1459 or Salaam Uhuru (617) 427-0642

April 27-29: EASTERN PSYCHOLOGICAL ASSOCIATION annual meeting, Boston Sheraton, contact Bill Zimmerman (617) 666-0136. or (617) 427-0642.

May 21-24: PHAGE MORPHOGENESIS conference, Vail, Colorado, contact Jonathan King (617) 492-2165 or (617) 864-6900 ext. 4700

CREDITS: p.3,7 *Philadelphia Inquirer*, p.9 *Win* magazine, p.14 *Survivre* magazine, p.31 D.Weston

EDITORIAL PRACTICE

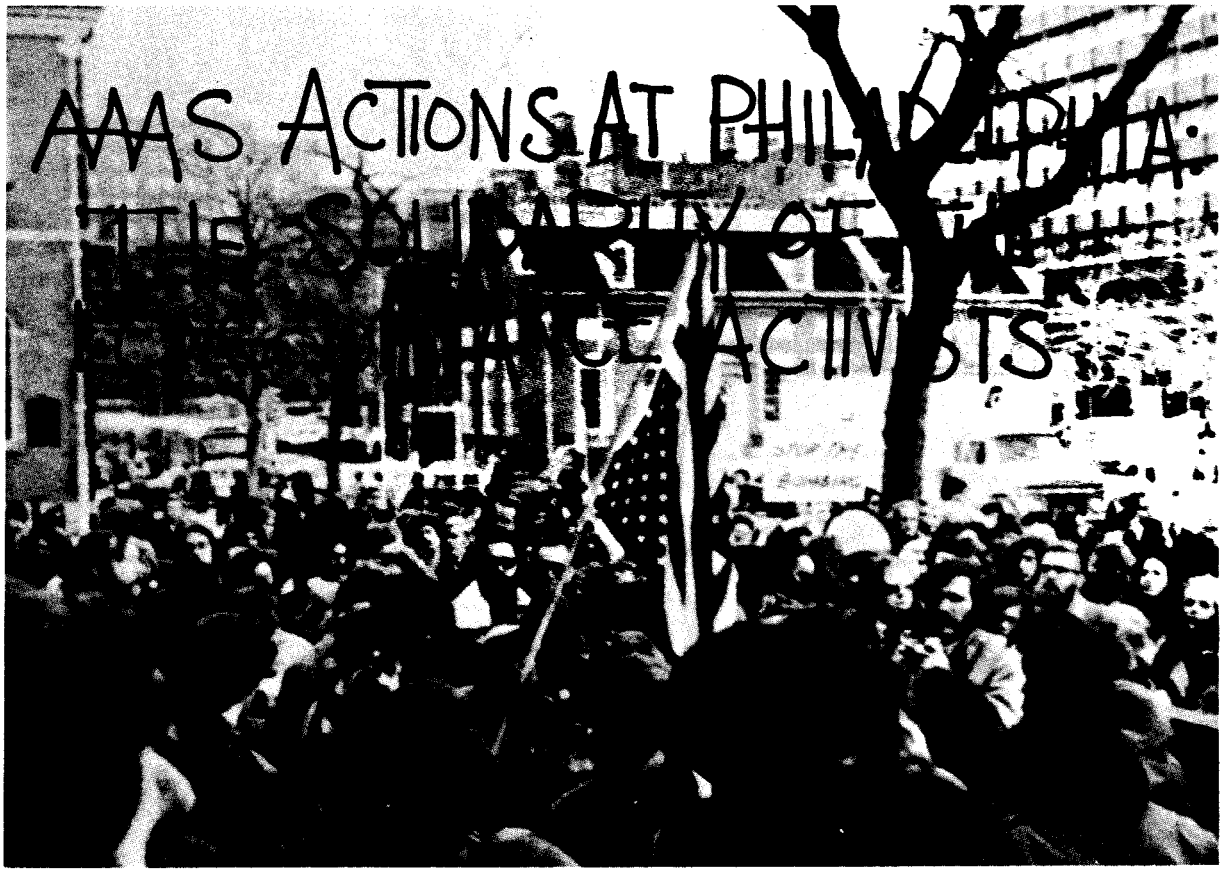
Each issue of *Science for the People* is prepared by a collective assembled from volunteers by a committee made up of the collectives of the past calendar year. A collective carries out all editorial, production, and distribution functions for one issue. The following is a distillation of the actual 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.

ABOUT THIS ISSUE

The March issue, like all other issues of *Science for the People*, represents people as much as it does ideas or facts. Steve Hollis (Brother Hollis Writes from Kansas, p. 25) is just another one of us who finds that the pains, pleasures, experiences and concerns of his life are the common experience of us all. Our sister, A.F. writes from Chicago (p. 23) showing the true comrade she is by helping us all learn through criticism. The actions at Philly that she criticizes are discussed (also critically) in several letters and articles in this issue. Chandler Davis recounts his experiences in China and Vietnam (Mathematics in China and Vietnam, p. 19) without censoring his own doubts and biases.

" . . . Everyone had struggled with themselves, with each other . . . People had practiced the concept of *consensus*, of everyone struggling together to arrive at decisions that everyone finds acceptable . . . People knew each other's personal strengths, weaknesses, convictions, and emotions." We borrow these words (AAAS Actions at Philadelphia, p. 4) to describe ourselves, the editorial collective of this month's *Science for the People*. We are people *first*, then literary critics: we range in age from 19 to 46, in occupation from physicist to secretary, are black and white, women and men, and encompass a wide range of experience, attitudes, and personality types. But since part of our struggle in this society is against dehumanizing exploitation, it is a pleasure to engage in the struggle of putting together this magazine, an experience which is so well described by the preceding quote. We feel that the personality on the cover embodies our entities.

We ask you to share a little of yourselves—what you think and feel as you read these pages and live your lives. Please write—double-spaced.



The American Association for the Advancement of Science (AAAS) is the largest organization of scientists in the country and includes many member societies of different disciplines. Its weekly magazine *Science* has some 150,000 subscribers.

For the past three years Science for the People has held actions at the annual AAAS meetings [1], questioning the political manner in which science priorities are established and the hierarchical and elitist way in which science is organized.

The AAAS finds itself in a curious (maybe not so curious) position in the face of these actions taken by fellow scientists. The Association tries to maintain the myth that science is pure and neutral, yet it is highly political: it attempts to influence the government's science policy. Just how political these meetings are is evidenced by the fact that politicians like Hubert Humphrey, Daniel Patrick Moynihan, and William Bundy are featured speakers. Yet at the same time Moynihan, fearful of political *discussion*, cancelled his vice-presidential address saying that politics has no place in science. What is apparent is that theories that justify and thus help to maintain the *status quo* are considered to be social science—legitimate topics at the AAAS, whereas the questioning of these theories, as encouraged by Science for the People, is branded disruptive and irrational.

The session *Technology and the Humanization of Work* typified the AAAS' handling of important questions and Science for the People's challenge. The format for this session was the usual: panel/silent audience/questions later. You walk in and, unless you are one of the few panelists, sit down in the neatly regimented rectangle of seats that make you unable to face anyone but the people on the podium. There is no microphone you can get to. In fact, according to the rules of this session, you are supposed to keep your mouth shut until ten hours from now, when there will be a special informal question-and-answer session.

The panel consisted of plant managers, company vice-presidents, industrial relations consultants, and university professors—people who were totally sheltered from the conditions about which they were holding forth. No secretaries, no assembly-line workers, no farm-workers—no one who had experienced the dehumanization of work first-hand. The same was true for the audience. When we pointed out this deficiency [see insert], the managers said that the meeting was open to the public (at a cost of $15) and notices had been sent to factories in the Philadelphia area inviting workers to come; of course, none of the company executives had thought of giving some of their employees a paid day off and an expense account to help them attend the meeting.

The Great Authorities spoke. Everything they said (or omitted) reflected the fact that their concern is for

the corporations and their profits and not for the people who are being dehumanized by their working conditions. The manager of the pet foods division of General Foods said that "workers have to relate to their product." He didn't say that what workers really produce are profits—profits for the owners and managers of their companies—and that maybe workers should relate a little bit more to the profits.

Then a speaker who had devised a plan to redefine the work of the telephone companies' "customer service representative" (the person you talk to when you want to get a phone installed or to complain about bad service) addressed the group. He kept referring to the service rep as "she." Finally someone interrupted him, "What do you mean by 'she'?!" "Well, there are also some men in that job," he replied, and went on. A few minutes later the same thing happened. But finally, he pulled out a chart with cartoon figures on it—the figures of a "manager," a "supervisor," and a "service rep." At no surprise to us, the manager was clearly male while the other two were clearly female. That did it.

"I want to know just exactly what percentage of women are employed as workers and what percentage as managers!" Pandemonium. Someone tried to put his hand over the mouth of the person who asked the question. The chairman was shouting about disruption and the chance to ask questions later. Some of us were demanding an answer to the question. The speaker was trying to say something. Finally things quieted down and the speaker was just about to go on when a straight scientist attending the session said quietly but firmly, "I should like to hear the answer to the question," and someone else said, "I want to also," and half a dozen more spoke up, and the session was ours. The chairman was forced to realize that the audience was more responsive to us than to his heavy-handed attempts to run the meeting. Now the questions really came. The percentage of women workers was some 90%, but the percentage of women managers was almost nothing. Yes, he replied, this probably did reveal a degree of sex discrimination. Was there anything in his plans to

LEAFLET HANDED OUT AT ONE AAAS SESSION

You are about to attend a session on *Technology and the Humanization of Work.*

Yet, though there are technologists and managers on the panel, there are no workers (there is an union official). That a panel should exclude rank and file workers is itself indicative of the basic problem. For technologists do not confer with the object of their experiments, nor do managers confer with the machines in their plants—and for these persons, that is just what workers are, objects. There can be no meaningful discussions of the humanization of work that does not begin with an explanation of the root of the problem—an economic system that treats labor as a commodity and creates or improves technology for the maximization of profit.

In fact, what does it mean to speak of the humanization of work in a system where the workers themselves are reduced to mere objects, bought, sold and traded like all other goods according to the demands of capital, not according to human considerations? For the workers, their creativity, humanity, and desire to be socially productive are drowned in the competitive struggle for economic security. They do not control the conditions of work nor the use made of the products of their labor.

The basic assumption underlying this symposium is that workers will remain a commodity. The effect of a session such as this is therefore not the humanization of work but the use of more sophisticated technologies and devices for controlling and manipulating workers in order to "maximize production and improve labor relations." The function of such studies is to attempt to make commodities feel like human beings and in so doing to prevent antagonism to an economic-political system which perpetuates the dehumanization of work by its institutionalization of labor as a commodity.

However, no one should think that the dehumanization and alienation so evident in the daily activity of production personnel and lower echelon white-collar workers is limited to these groups. The managers of the corporation or organization which harnesses human labor for the purposes of profit apparently have greater control over their own lives and work. Though they consciously exercise power, they are both objectively and subjectively dehumanized by their roles. Their job is to manipulate other human beings, to treat them as commodities, as things. Thus the managers' relatively increased freedom has been bought at the expense of the freedom of others. There is only one human species—the exploitation of one human by another dehumanizes both.

What will be critical to the actual humanization of work, is not only a fundamental analysis of the present forms of institutionalized dehumanization but action to change these institutions; workers' control of their work and of their lives is essential. Managers and industrial-relations technocrats serve only a destructive function. The proper topic for this session would be strategies for gaining workers' control and elimination of the managerial positions and technocratic functions of the present panelists.

SCIENCE FOR THE PEOPLE!

humanize work that would eliminate this discrimination? No there really wasn't. How was it possible to humanize work without humanizing the fundamental human relationships at the place of work? He tried to explain how we couldn't do everything. Was the telephone company really interested in providing better jobs for people or was it more interested in getting as much work as possible out of the people on the job? He said that it was probably the latter.

Just before the meeting adjourned, several panelists thanked us for coming to the session, remarking that contrary to their first impressions, our participation was both sincere and constructive.

On the fifth day of the conference William Bundy, Undersecretary of State under Johnson and chief architect of the air war, was scheduled to speak on "Conflict Situations: Vietnam–The Knowledge Gap." After years of the war, voluminous documentation of government lies and the overwhelming anti-war sentiment of the people of the United States, what greater insult to the audience could be devised than having government ideologues read prepared papers on this subject? We couldn't and didn't let it happen. At 8 a.m., an hour before the meeting, after all-night discussions and preparation of tactics and questions, we arranged the chairs in concentric circles to break through the usual schoolroom atmosphere. The panelists could no longer be segregated from the audience and the microphone was now available to all. Leaflets with questions were on everybody's seat. Bundy answered the questions glibly and called for more research on whether there really was massive bombing of civilians in North Vietnam. It seemed for a moment that the dull bureaucratic style of his answers might color the entire meeting. However, the audience felt otherwise. Once begun, the questions couldn't be stopped, not by the chairman, who was forced by the audience to call a vote on whether we should return to the prepared speeches and then have a discussion, or have an hour of discussion and then speeches. The vote for the latter went 73 to 56. (The option of having discussion only was unfortunately lost in the shuffle.) Now the questions really came down: What kind of system is it that produces men who willingly fill the roles that compel them to devise and justify destruction of millions of people? He never answered that one. Upon proposing that a citizen's commission investigate all the facts concerning the war he was asked how such a commission could do the job if he, Bundy, who was at the center of decision making, could not come up with the facts. His whole cynical game of sometimes claiming expertise and at other times ignorance–whichever suited him better–was exposed. At one time he referred to the government lies as unfortunate mistakes, at another time he countered a question on people's anti-war sentiment by saying that the will of the people is vested in Congress and Congress continues to vote appropriations for the war. He was caught in his own lies when someone with a great deal of detailed knowledge who had been to North Vietnam countered Bundy's false assertions about the role of the Provisional Revolutionary Government (PRG). At one point

Leslie Gelb, a Pentagon Paper writer now turned against the war, accused young people of not appreciating how difficult it is for people educated in the 'forties and 'fifties to change their views. He was answered by a woman in her late twenties, who emphasized that most of us had gone through the same Cold War brainwashing, that our awareness of the inhumanity of the system did not grow in a vacuum but was preceded by the same kind of indoctrination Gelb had received.

After two hours the chairman chose to hustle Bundy out of the room when the audience showed more interest in having him continue to answer questions rather than give the prepared talk. The discussion continued for another hour–without them.

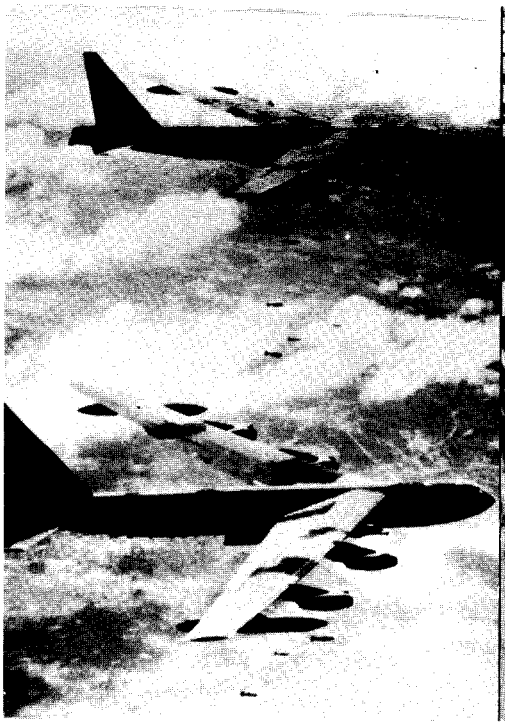
Such a thorough restructuring of the session was not as easy as the final success might seem to indicate. We needed a program that would be acceptable to and involve the rest of the audience. We had to work out tactics with political content. We needed enough understanding of the dynamics of the situation in order to be flexible in our tactics. This required a sense of community and mutual political understanding that we could not have on the first day, when we had just gotten together from all different parts of the country and didn't know one another. Instant consensus was not possible. We had to work out questions such as what constitutes freedom of speech, whom we wanted to reach, how we should relate to the media, and whether people who had participated in the decision making process had a responsibility to

carry out decisions of the group. Initially, not all of us were aware that these problems existed. Thus the planning for the first major event–Humphrey's speech–was inadequate and led to a poorly coordinated action. As the week progressed, our sense of community grew, our political analysis became clearer, and, as a result, the actions were more coordinated and effective.

Half an hour before Humphrey was scheduled to speak the entire stage was already decorated. People–most of them from the several participating groups–had put up Science for the People posters, Vietnam solidarity flags, and several hand-lettered signs with slogans such as "300 more killed today." The posters remained. The AAAS leadership, wanting to avoid a confrontation on this occasion as on others, piquedly claimed that the critics should not be taken seriously. "Let them have their childish posters!" said outgoing AAAS President Athelston Spillhaus. Thus Humphrey made his promises for a peaceful future and his pleas to forget the past underneath a placard reading "Humphrey, Pimp for U.S. Imperialism" and amidst a shower of paper airplanes made from NLF flags–a timely reminder of the new escalation of the air war in Vietnam. Margaret Mead, upset over the remote possibility that the former Vice President might have been hurt, said to some of us later, "the paper planes could have hit him in the eye." When we reminded her about the real bomb-laden U.S. planes over Vietnam, she retorted, "That's not the point." Apparently not everyone understood the irony of bombarding a leading government spokesman with paper Vietnam airplanes.

Anyway, Humphrey gave one of those apologetic-sounding, politically opportunist speeches, punctuated occasionally by a comment from the audience: "Surprise!" rang out when he claimed that the true purpose of Project Camelot was not known to him in 1965, that at that time he and others believed it was an inoffensive social science research project. (Humphrey's belated acknowledgement that DoD-sponsored Project Camelot was designed to use social science techniques for counterinsurgency in Latin America comes long after the true nature of Project Camelot was uncovered by others [2].) Not all comments were verbal. During his startling revelations a tomato was thrown. Whether by design or technical failure, it struck the front of the podium and left Mr. Humphrey's beige suit impeccable, press reports notwithstanding. The tomato thrower and one of the paper airplane architects were immediately hustled out by plainclothes members of the Philadelphia Police Civil Disobedience Squad. They were later released without charges.

At the end of the speech a few questions were allowed. Did he endorse the immediate and complete withdrawal of all American troops from Indochina and the withdrawal of all support from the Thieu regime? He answered positively. It would be naive to be anything but skeptical about the credibility of such a statement by a candidate for President in an election year. year.



THE U.S. BRINGS FREEDOM TO THE PEOPLE OF VIETNAM

A "HANDFUL OF FANATICS" BRING "PHYSICAL VIOLENCE" TO THE AAAS MEETING

During the course of the first few days, Vietnam Veterans Against the War were carrying out activities all over the country, including Philadelphia. Appearing at our planning meetings they requested support for a march on Wednesday. Originally on Wednesday we had wanted to confront Moynihan, Nixon's former urban affairs advisor who had advocated "benign neglect" of impoverished Black Americans; but he copped out. Claiming outrage at Humphrey's reception he cancelled his political talk claiming "the radicals are out to 'politicize' the science association." [3] Moynihan's absurd behavior stimulated two positive results: his peers among the AAAS establishment chided him, acknowledging Science for the People's constructive role, ". . . science gets at the truth . . . by open discussion of differing points of view;" [4] and we were able to concentrate our efforts on actions in solidarity with the Vietnam Veterans.

How to make sure all the conferees knew of the vigil and march? Because of the short time, the thousands of fellow scientists who had to be reached, and the lack of dramatic impact of leaflets alone, the planning meeting concluded that it was necessary to go in groups to each of the AAAS sessions and demand three to five minutes to present the Vietnam Veterans message. Two groups were formed of 12 to 15 people each—so-called "Flying Squads." A format was agreed upon for coordinated entry and presentation of the message in each session; the object was to convey the sense of urgency, to be brief but forceful, but yet not alienate the session participants. Each group decided that it was important for everyone in the group to have a chance to address a session—just one of many examples of how the protesters tried to keep their practice in line with their principles. This was a deliberate (and successful) effort to avoid elitism, to avoid always being represented by a few articulate "heavies."

The tactic proved successful. Generally the speaker, chairman, and audience consented to hear the announcement. Some audiences even applauded. Some chairmen (no chairwomen were noted) thanked the group for coming. However, not all were successful. One painful instance involved the session on the "Immunity and Immunopathology of Oral Soft Tissues." We opened the door and found ourselves physically in the middle of a slide show on tooth decay. An unplanned-for contingency; moments later a dozen and a half of us were stumbling around in the darkened room trying our best to leaflet quietly and locate the chairman. Members of the audience began yelling "Down in front!" and "Get them out of here!" The dentists managed to extract us forcibly from the room before we could do our song and dance.

Just before 11 o'clock, individuals from the "Flying Squad" went back to the sessions to follow up the announcement by encouraging members of the audience to join the vigil and march. About 250 scientists, students, veterans, and dozens of plainclothesmen gathered in front of the Sheraton Hotel for the vigil. The site was appropriate not only by reason of convenience but also because, as several posters pointed out, Sheraton Hotels are owned by I.T.&T., one of the principal war contractors responsible for the automated battlefield in Vietnam.

Veterans in the lead, the scientists marched through Philadelphia. The response of the sidewalk crowds was encouraging. Some people raised their fists in solidarity, several times Black sisters left the sidewalk to march with us, and when we passed through City Hall, about a dozen employees looking down from the second floor lobby saluted the march with raised clenched fists.

At Independence Hall the vets and some radical scientists addressed the crowd. The vets told about other Veterans' actions: the take-over of the Saigon Consulate in San Francisco and the take-over of the LBJ Library. The climax came when a veteran with the unlikely name of John Birch smashed a bag of his own blood on the steps of Independence Hall.

Heading back through the center of town to the Quaker Meeting House we heard someone yell "You're a bunch of Commies!!" But the bogeyman of communism doesn't work like it used to; from a half-dozen marchers the response was a loud "Right On!" At the meeting house, a Quaker greeted us from the steps requesting that those bearing arms not enter the house. Curiously, some well-dressed non-demonstrating men who had been with us the whole way and were actively photographing the whole group did not come in with us.

When we returned to the AAAS, some radical scientists went with the veterans to the larger, society-oriented sessions to try to raise bail money for their comrades who had been arrested at the Lincoln Memorial in Washington. Within five minutes, meeting attendees contributed $200. Clearly our "Flying Squad" tactic as well as the conduct of the vigil had not generated much hostility.

There were many other signs that the hostility of the Moynihans was not representative of the attitude of most of the scientists attending the Convention. The receptive and genuinely interested attitude people had toward us was most evident at our literature tables—our one continual activity. The lit tables were so prominent that many scientists spent twenty minutes going from table to table reading radical literature before realizing that they weren't registering for the convention. At one end of the array of lit tables at the Sheraton was the Federation of American Scientists, the self-described "voice of science on Capitol Hill." They hired a model—a woman—to hand out their literature. At the other end was the Progressive Labor Party whose proclaimed purpose is "guiding [the people] to working-class revolution;" several soft-spoken academics sold their "revolutionary communist newspaper."

Many scientists wanted to talk with us. Some told us they were glad we had come, we made it so much more interesting. Some were sympathetic with what we were doing, but didn't understand or approve of our tactics. A few who had come to the convention as regular attendees ended up working with us full time!

For those of us who feared that people are so accustomed to receiving leaflets that they don't even read them anymore; it was an inspiration to find that many people took anything we offered. It was impossible to create a leaflet glut! People would come up to our tables, receive three or four items, and stand there reading everything. Then came the discussions which were generally low-keyed and earnest. The scientists were friendly and sympathetic even if they disagreed. There was no red-bating. The many discussions with individual scientists showed that there was a genuine interest in our challenge to the scientific establishment. Scientists, perhaps more than any other professional group, have in recent years experienced that their privileges are not immune to the shifting economic and political winds. As the result of cutbacks of government funds in the space and defense industries and of the general slowing down of the economy, unemployment among scientists and engineers has reached much the same level as among other workers. These hardships or their threat have forced many scientists to take a critical look at other aspects of their work: fragmentation and meaninglessness of tasks, lack of control over the product of one's labor, competition, the publish or perish rat race, the near-feudal control of graduate students by their professors. A profound uneasiness and ambivalence toward science is—often unconsciously—experienced by scientific workers at all levels. The efforts of Science for the People have been directed toward analyzing and struggling to change the social and economic conditions that give rise to this situation.

But the economic and social conditions that have created unemployment and alienation among scientists and engineers are also the basis for the even more oppressive conditions of the working class, especially minority workers. It was with just such people—the hotel workers —that we first made contact. Since we had brought our stuff into the hotels through the back doors and had gone through the bowels of the building, we saw and made friends with many of the hotel staff. We couldn't help noticing how busy they were kept wheeling around wagons full of iced water pitchers and flowers, all for the luxury of the distinguished members of the convention, who stood around chatting. Of course, most of the staff was Black, most of the scientists white. We talked with staff members, gave them literature, and for a day or two—until they were told not to—they wore the Science for the People buttons for which they had asked us.

So also did some of the AAAS support staff. It was therefore a surprise to a few of us who were working the lit tables when the flash of a Polaroid camera came from the direction of a friendly Science for the People button-wearing Black woman registrar. Did she not know of the boycott of Polaroid products in protest of Pola-

roid's role in the oppression of Blacks in South Africa and in Cambridge, Mass.? One of us went to speak with her and two of her colleagues. A white woman argued against the boycott, saying Polaroid had nothing to do with apartheid or racism, "All they want is profits. That's all they care about." We agreed. She said, "But if it wasn't Polaroid, it would be someone else." Sure, but instead of resignation in the face of these facts we must continue to struggle and draw in precisely those people who know the conditions but whose ability to overcome them is limited by the liberal best-of-all-possible worlds rhetoric and ideology.

And then, after five days of almost non-stop activity, when all were amazed at the fact that they were still awake, after a 32-hour stretch that began with the "Flying Squads," continued through the demonstration, through an all-night meeting, through the Bundy confrontation, through a long criticism session—then came the party. The party was really a celebration, but not because it had been planned this way. It was a celebration because everyone had struggled with themselves, with each other, and with the established order we hate so much, and everyone felt that to a certain degree what was right had come out on top. People had practiced the concept of *consensus*, of everyone struggling together to arrive at decisions that everyone finds acceptable rather than just voting. People knew each other's personal strengths, weaknesses, convictions, and emotions. People had been relying on each other collectively through tense and frightening situations, and Thursday night, when it was all over, when everyone was still alive and unhurt, the excitement of the week poured out in a fine demonstration of joy and love.

Women, who have been dealing for some time with the breaking down of barriers between themselves, were the first to get into the spirit of collective love. They danced together, with as much pleasure as when they were dancing with men. Gradually the spirit of the party was incorporated in the form of the dancing: everyone was in a large circle holding on to the person on either side. Men danced with each other without any shame. Good music alone was enough to celebrate about after five days of horrible inescapable canned music in the hotels. And the big circle went round and round, until people began to go off to catch a few hours of sleep before setting off for their cities and another year of study, action, and the building for bigger and better things to come. S.C., B.F., A.S.

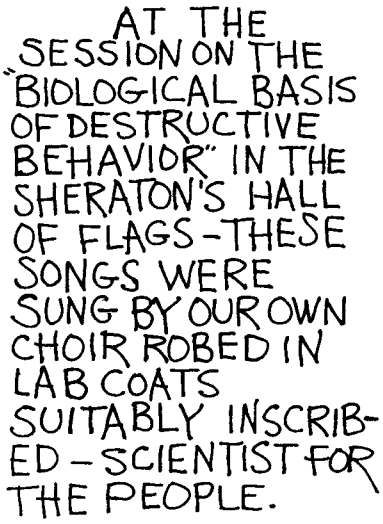
REFERENCES

[1] *See e.g. the February 1971 issue of* Science for the People, *Vol. III, No. 1 for an account of the actions at the 1970 AAAS meeting.*

[2] *For example, Irving Louis Horowitz, ed.,* The Rise and Fall of Project Camelot, *M.I.T. Press (1967).*

[3] *Reported in the* San Francisco Chronicle, *December 29, 1971.*

[4] *AAAS Director Barry Commoner, quoted in the* San Francisco Chronicle, *December 29, 1971.*



Sing to: "Ain't She Sweet?"

Ain't they sweet?
They're the ruling class elite—
And it's all determined quite genetically
Ain't they sweet!

Ain't they cool?
They're the class just born to rule
Over all of you who are the residue
Ain't they cool!

Black workers' genes have imperfections
So don't fight back—it's natural selection
(lay 'em all off!)

Ain't they fine?
They're the pearls before the swine
And it's all determined quite genetically—
And we'll tell you parenthetically—
Though our logic stinks pathetically—
Ain't they fine!!

Sing to:
"Five Foot Two, Eyes of Blue"

152—High I.Q.
And oh, what those few points can do
Has everybody seen our score?
Better jobs, above the mobs
A few smart ones and a lot of slobs
Has everybody seen our score?

Now if you think
The system stinks
I disagree.
Don't you know that we can show
It's all a meritocracy—

Read our books and you will see
Support your local bourgeoisie—
Has everybody seen our—
It's all in our genes our—
Has everybody seen our score?

EXCERPTS FROM TAKE HOME EXAMINATION ON SAMUELSON'S *ECONOMICS*

1. ON TAXATION: "As no one knows better than the man at the top, our system of progressive income taxation has already greatly changed the relative take-home and—what is more important—the 'keep-at-home' of the high and low paid." (p.116) Comment in the light of statistics. If Gabriel Kolko is too radical a source, use government statistics.

2. ABILITY AND INCOME: "A young person with high I.Q. and versatile talents who stays in a dull dead-end job or dying industry is similarly squandering his economic potential." (p.449) If there are barriers to advancement, implied in the graph (p.116) showing income distribution more skewed than the normal curve distribution of ability, is "squandering" a value-free term?

3. ABILITY AND INCOME, CONTINUED: Samuelson cites two possible explanations for decreasing mobility. "(1) There has long been social mobility in America: All the cream rose to the top some time ago . . . (2) There are strong and perhaps growing barriers to circulation between the economic classes . . . Whichever view is right, the implications for policy are the same." (pp.117-118) What implications for policy? Are these the only explanations? Critics charge that psychologizers like Jensen and Herrnstein, who bring forth unproven explanations of why poverty might be due to supposed genetic factors, are reinforcing racism. Relate to the "rising cream" view.

4. ON OPPRESSION OF WOMEN: "The provision of schooling and the invention of the typewriter have done as much to emancipate women from the ancient domination of male chauvinists as all the hunger strikes of suffragettes or advanced plays of Ibsen and Shaw." (p.769) Is your typist emancipated? Why are so few men typists? Why are wages unequal for men and women at all educational levels (see Question 3)? Is the example of the man who reduced GNP by marrying his housekeeper a statistical quirk (p.185), or does GNP reflect accurately the inferior position given by society to women's household labor?

ERRATUM

In the January 1972 (Vol. IV, No. 1) issue of *Science for the People*, credit for the pictures on pages 20 and 21 was omitted. They were made available by the People's Free Health Center—a Black Panther Party community survival program, Massachusetts State Chapter. Thanks.

SUMMARY AND CRITIQUE OF RADICAL ACTIONS AT THE ECONOMIST'S CONVENTION IN NEW ORLEANS

At the American Economics Association (AEA) Convention in New Orleans the Union for Radical Political Economy (URPE) found many economists receptive to progressive ideas. On Monday we put out a leaflet challenging Paul Samuelson's economics [see insert] and distributed it at a luncheon which was honoring him for winning the Nobel prize in economics. At the business meeting Tuesday a resolution of the Women's Caucus, which was started by women in URPE, was passed. This resolution proposed positive steps towards ending sexist practices in the economics profession (discrimination in pay, hiring, acceptance to graduate school, and fringe benefits, as health insurance and maternity leave). It called for the initiation of a special commission which, among other things, would safeguard against sexist practices by publicly listing those schools which were found guilty of sexist practices. The resolution also called for the formation of a committee which would recommend reforms of the job placement procedures, including open listing of all jobs available. Previously, many of us in URPE felt that the overwhelming number of economists were reactionaries. We, therefore, concentrated more on providing professional information to the movement. However, the wide appeal our actions had has convinced many that we were mistaken in our approach to other economists.

If URPE begins to fight within the AEA we will have to curtail *some* of our independent activities at the convention. This year we ran a *full* program. Not only did it limit our ability to leaflet for the business meeting and give out the Samuelson leaflet to many more attendees, but we were not able to confront some of the more reactionary AEA sessions. Another weakness of the convention was that we had limited political discussion of what we wanted to accomplish there. We had to rely more on spontaneous discussions and this also limited our effectiveness.

All in all, though, we think URPE's actions were very positive. We reached many economists with our ideas and saw that they were very receptive. Also, an important resolution was passed and we successfully confronted an important bourgeois economist. B.C.

HERRNSTE

HERRNSTEIN IDEOLOGICA

● Each year, sandwiched between Christmas and New Year's days, the American Association for the Advancement of Science (AAAS) holds its annual meeting in a major American city, with its headquarters in a towering hotel of a major American hotel chain. Invariably, not very far away is a major American ghetto, and of course there is a major American parking problem in the vicinity of the hotel. The modest prices charged in the hotel's coffee shop are a constant reminder that the primary function of such hostelries is to provide for the simple human needs of the weary, hungry travellers that seek its temporary shelter.

This year it was at the Sheraton Hotel on John F. Kennedy Boulevard at 17th Street in downtown Philadelphia that the AAAS made its headquarters for six days. As a salute on the opening day of this great convocation of American scientists in the City of Brotherly Love, and in order adequately to celebrate the value of science to humanity, the President ordered the greatest aerial bombardment of *his* America's enemies in Indochina (the Indochinese people) in many a moon. Fortunately, the President's employment of science and technology in advancing the cause of democracy was nine thousand miles away, and did not interfere with the happy post-Christmas tinkling of the cash registers of the I.T.&T.-owned Sheraton hotel.

To this momentary mecca of scientific expertise came such notable objective scholars as Hubert Humphrey, Daniel Patrick Moynihan, and William Bundy, each in his own way a caricature of Americana. Not present at the convention, but eager to add his scholarly observations nevertheless was ex-Communist and now-seer-of-the-true-light, Professor of Philosophy Sidney Hook, whose homage to "a handful of fanatics, invoking 'science for the people'" appeared in the *New York Times* of January 17, 1972.

An especially astute observer at the Sheraton or at one of the four or five other hotels that the conference also used might have perceived that the vast majority of the conferees were not women, were not Black, were not Puerto Rican, were not poor. But those who worked in the hotels were cut from different cloth than the conferees. And that division too is part of America. And so is the ideology that helps to maintain it.

Among the fanatics were some—whom we may call the 'Herrnstein buffs'—who believe that it is important to try to combat the ideology that helps to justify the class divisions in American society. So, with zeal that only fanatics can muster, some members of the Boston chapter of Science for the People prepared sixty reams of literature (actually it's not literature that a writer would write) on the Herrnstein controversy (see the article, "Science in the Justification of Class Structure", *Science for the People*, Vol. IV, No. 1, p. 6, January 1972). This 'literature', together with lots of other stuff, got packed into a truck borrowed from the Boston Black Panther Party for the trip to Philadelphia. The saga of that trip—but never mind! Had the CIA decided to prevent the truck from getting beyond Ozzie's Gulf service station in Fairfield, Connecticut, they could hardly have done better than to rely on the scientific and technical expertise of the Boston fanaties. But the contents of the truck made it to Philly.

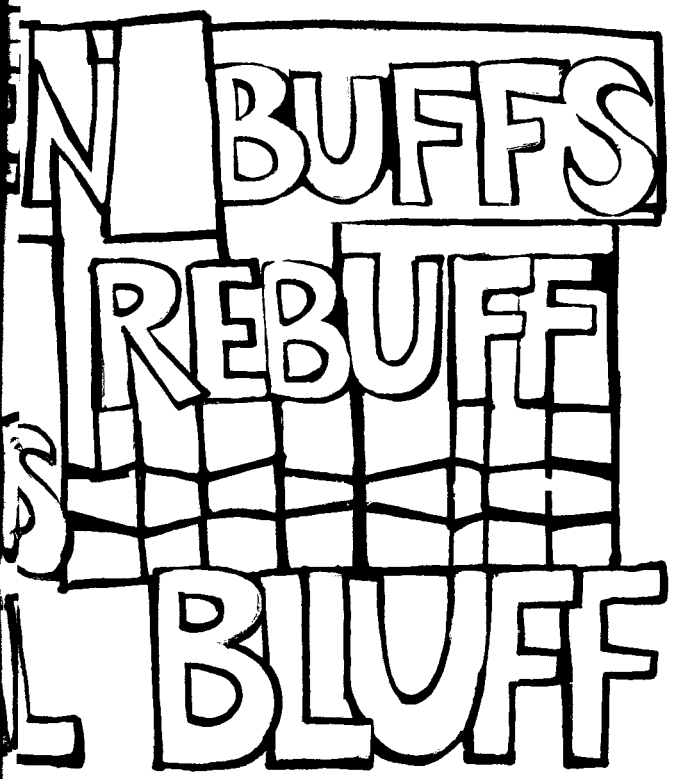
When copies of the pamphlet on Herrnstein arrived at the hotels, an unusual thing happened. The people who worked in the hotels were just as interested in it as were the conferees. And why not? That's part of what Science for the People is supposed to be all about. Here's a quote

OTHER PROFESSIONAL GROUPS CONDEMN NEW SOCIAL DARWINISTS

Resolutions passed by the American Anthropological Association, the Northeast Linguistics Society, The American Philosophical Association and the Radical Historians' Caucus contained the following:

> ". ... condemn as dangerous and unscientific the racist, sexist and anti-workingclass theories of genetic inferiority propagated by Richard Herrnstein, Arthur Jensen, and H.J. Eysenck. There is no warrant for ascribing to genetic factors the oppressed condition of blacks, women, and workers."

Similar resolutions were also introduced in four other professional association meetings according to UAG (University Action Group, 60 Fairmount St., Cambridge, Mass. 02139).



(from an article on the New York City public schools) that the pamphlet (cover pictured below) contained:

> Perhaps an even greater achievement of the schools has been their ability to place the responsibility for this extraordinary record of failure upon the children themselves, their families, and their communities. Social scientists engage in learned disputes as to whether it is heredity or environment that makes the child of poverty an inferior form of humankind—but the assumption of his inferiority is not disputed, except by his parents and by the child himself. . . .
>
> The curve of reading achievement by school in New York City is strange. It is bi-modal, a double-humped "normal" curve. It peaks at two-and-a-half years *below* grade level, falls to nearly zero *at* grade level, and then rises to a peak again at two and a half years *above* grade level. Black and Puerto Rican schools lie on the below-grade half of the curve, continental white schools on the above-grade. There are, in effect, two independent curves, one for Blacks and Puerto Ricans, the other for whites. They are a graphic description of two school systems—one that fails and one that succeeds. Thus, the accomplishment of the school system is even more impressive. Their task is not only to succeed in failing the Black and Puerto Rican children; they must, at the same time, succeed in teaching the white children how to read well.
>
> Both goals are essential to reproduce the economic and political life of the city. Blacks and Puerto Ricans are needed to man the restaurant kitchens, the hospital orderly jobs, the hand-trucks and workrooms of the garment district, the unskilled port jobs, and the draft calls. "Others", the delicate euphemism for whites invented by our skittish schools, must be trained to fill the hundreds of thousands of office jobs in this financial and commercial capital of the world. Fresh new vigor must be recruited from the white middle class to renew the executive and managerial elites that run the city's business and politics. . . .
>
> . . . In *Dark Ghetto* Clark states the charge later confirmed experimentally by Rosenthal and Jacobson: "These children, by and large, do not learn because they are not being taught effectively and they are not being taught because those who are charged with the responsibility of teaching them do not believe that they can learn, do not expect that they can learn, and do not act toward them in ways which help them to learn."
>
> —Annie Stein, "Strategies for Failure", *Harvard Educational Review*, May 1971.

An effort that had been planned by these same Boston fanatics was the widespread circulation of a public statement on the Herrnstein controversy, followed by a drive to secure signatures from many of the conferees. However, the stepped-up aerial war and the felt need to respond affirmatively to the Vietnam Veterans Against

the War, who asked the radical scientists at the AAAS convention for their support, and for help in obtaining that of the other scientists there for the veterans' demonstrations, undercut the drive for signatures.

Additional copies of the statement, as well as of the pamphlet, are available at the Boston office of Science for the People, 9 Walden St., Jamaica Plain, Mass. 02130

G.S.

THE SCIENTIFIC METHOD *INCLUDES SEVERAL STEPS*

**FINDING AND MEASURING ALL THE FACTORS CONTRIBUTING TO A SITUATION*

**CORRELATING THE FACTORS*

**VARY THE FACTORS ONE AT A TIME TO SEE THE PARTICULAR RESULT OF EACH*

(from Psychology Made Easy by A.P.Sterling, Doubleday)

A PUBLIC STATEMENT ON THE HERRNSTEIN CONTROVERSY

INTRODUCTION

Psychology professor Richard Herrnstein of Harvard University published an article titled "I.Q." in the September issue of the *Atlantic*. In it he says, ". . . data on I.Q. and social-class differences show that we have been living with an inherited stratification of our society for some time." In what he calls our "growing meritocracy", this stratification into rich and poor is supposedly due to the rich having more intelligence *coded into their genes*, on the average, than the poor.

Stripped of its academic parlance, his thesis is simply and bluntly that poor people are poor because of their average lower *inherited* intelligence. According to Herrnstein, this explains for example "[t]he failure of compensatory education" programs, and "the increasingly chronic lower class in America's central cities." If he were correct, then it would be foolish to offer special scholastic help to so-called "underprivileged", "culturally deprived" children. Their intellectual poverty, if genetically fixed, could not be significantly altered. It would justify abandoning many socially progressive programs.

Herrnstein also writes that "we now have the mental test [the I.Q. test] that he [Galton] thought was the crucial prerequisite" for a program of eugenics – a program "of supplanting inefficient human stock by better strains." Moreover, although he concedes that "the overwhelming case is for believing that American blacks have been at an environmental disadvantage", he nevertheless says there is some evidence "for a genetic component in the . . . well-established, roughly fifteen-point black-white difference in I.Q."

Upon publication, Professor Herrnstein's article received widespread public notice, e.g. *The New York Times*, Sunday, Aug. 29; *The Washington Post*, ; *Time*, Aug. 23; *The Boston Globe*, Sunday, Sept. 19; *Newsweek*, Aug. 23.

Thus it is apparent why Dr. Alvin Poussaint, a black psychiatrist in the Harvard Medical School, wrote of Herrnstein, "Whether he intended it or not, he has become an enemy of black people and his pronouncements are a threat to the survival of every black person in America." (Boston *Globe*, Dec. 3).

Because of Herrnstein's academic prominence, some people have mistakenly assumed that his article is a careful distillation of scientific information based on experimentally well-established facts. It has quickly become the subject of wide and vigorous controversy, and has prompted the undersigned individuals to issue this statement.

THE HERRNSTEIN ARTICLE: SOCIAL DARWINISM UPDATED

Professor Herrnstein's article on I.Q. in the September *Atlantic* can hardly be described as honest, serious, or legitimate scholarship. It is not at all unfair to characterize it rather as a non-scholarly, pseudo-scientific, pseudo-objective polemic: a popularization of the social doctrine that people who are born poor in our society are, on the average, *genetically* inferior in intelligence and other qualities. In Herrnstein's words,

> "As the wealth and complexity of human society grow, there will be precipitated out of the mass of humanity a low-capacity (intellectual and otherwise) residue that may be unable to master the common occupations, cannot compete for success and achievement, and are [sic] most likely to be born to parents who have similarly failed . . .. [I]n times to come, as technology advances, the tendency to be unemployed may run in the genes of a family about as certainly as bad teeth do now."

Nor is the notion of a genetically inferior lower class merely Herrnstein's scientifically-based prediction for "times to come." Clearly he means to account for the plight of many who are alive and suffering today. Only a few sentences later, in discussing the growing rebelliousness of the poverty-stricken inhabitants trapped in our urban ghettos, he writes,

> "The troubles . . . have already caught the attention of alert social scientists, like Edward Banfield, whose book *The Unheavenly City* describes the **increasingly chronic lower class in America's central cities**." (boldface added for emphasis).

Thus, with his article, Herrnstein joins Profs. Arthur Jensen of Berkeley, William Shockley of Stanford, H.J.Eysenck of London, and others in the camp of the current Social Darwinians by putting forward a slightly updated version of the old doctrine: just as in the plant and animal kingdoms where the long-term dominant species are the fittest for survival, so also in human society the members of the dominant classes achieve their status because of their superior natural endowment. It is their native abilities which make them the most fit, and, through the process of natural selection, presumably these superior traits are genetically transmitted to their children, thus maintaining the distinctive features of the dominant classes.

There is a striking historical parallel between the re-emergence of Social Darwinism, with its hardly-veiled racism, in our day, when the forces for constructive social change are growing year by year, and the earlier appearance of an even more blatantly racist ideology which sought to destroy the Populist movement at the close of the last century. Yale historian Prof. C.Vann Woodward in *The Strange Career of Jim Crow*, writes of this former period,

> "It was quite common in the 'eighties and 'nineties to find in the *Nation*, *Harper's Weekly*, the *North American Review*, or the *Atlantic Monthly* Northern liberals and former abolitionists mouthing the shibboleths of white supremacy regarding the Negro's innate [i.e. genetic] inferiority, shiftlessness, and hopeless unfitness for full participation in the white man's civilization."

Although their articles may be clothed in academic-sounding language, the message that present-day Social Darwinians are transmitting is clearly an attempt to counteract growing popular support for socially progressive legislation and needed reforms. The thesis is simply that poor people are poor not because it is in the nature of a capitalist society to produce great disparities in material well-being among people, but rather because poor people are, on the average, genetically unqualified to climb out of their poverty.

This is not the place to refute in detail the assumptions and alleged facts which ostensibly provide a "scientific" basis for this particular article espousing Social Darwinism. One example may suffice to indicate the calibre of Herrnstein's argument. He states unequivocally that "The measurement of intelligence is psychology's most telling accomplishment to date." That is certainly a false statement, and not only trivially because it neglects other achievements of psychology that are more "telling", but significantly because it implies – without a suggestion of doubt – that psychologists *know* more than they actually do about intelligence – that they *know* in the kind of precise scientific way that must precede careful and meaningful measurement, *first*, what the concept of intelligence, as the term is generally understood, really means, and *second* how to quantify it so that it is subject to measurement. The fact is that psychologists merely equate intelligence with a score on a so-called I.Q. test. This crude form of operationalism is what Herrnstein would have his readers believe to be "psychology's most telling accomplishment."

The fact that it is called an Intelligence Quotient test is of course merely begging the fundamental psychometric question of whether it has any significant relationship to intelligence or to its measurement. Neither is Herrnstein any more a specialist on psychometrics than on economics, sociology, genetics, and the other disciplines which his argument invokes, nor has he taken the trouble, as a serious and intelligent layman might, adequately to inform himself in these areas. He reveals the paucity of his own thought on the fundamental psychometric question when he writes that "**whatever the I.Q. is, boys maintain it better than girls.**" In so far as Herrnstein can legitimately represent himself as being an honest and serious academic scholar, it is in a field far removed from the area of human intelligence. He is best known among his professional colleagues for experiments on vision in pigeons.

The main point is that the assumptions and the reasoning which underlie Herrnstein's position are manifestly arguable. His "facts" and interpretations are contested by large numbers of equally prominent and more qualified academic colleagues. Therefore he is totally unjustified in drawing his sweeping conclusions, with their profound social implications, and in presenting them to the public-at-large as though they were firmly established scientific facts. Instead of exposing his ideas to scientific scrutiny in the conventional way, Herrnstein has chosen to engage in the wide public dissemination of a thesis which is at best highly dubious and at worst false and malicious, and he has done so in a manner that capitalizes upon his academic prominence, thereby giving the impression that his article speaks with an intellectual authority that in fact it does not possess. Having done so, he can hardly be permitted to take refuge in the pretense that these are the actions of an honest and serious scholar, and that to criticize them is to attack his academic freedom.

No one should harbor the illusion that the writings of the current Social Darwinians are merely of academic, scholarly, or scientific interest. Far from being creations of pure and innocent intellectual activity, they are fraught with social consequences of the most serious kind, and they lack the scientific validity which their authors attempt to have us take for granted. As concerned individuals, we condemn such pseudo-scientific activities, and we invite others to join with us in removing their cloak of academic respectability.

This statement is sponsored by the following individuals, whose affiliations are shown only for purposes of identification:

Sister Marie Augusta Neal, President, Association for the Sociological Study of Religion
Hilary Putnam, Professor of Philosophy, Harvard University
William Ryan, Professor and Chairman, Department of Psychology, Boston College
George Salzman, Professor of Physics, University of Massachusetts at Boston
Ethan Signer, Associate Professor of Biology, Massachusetts Institute of Technology

THE STRANGE PROCEDURES OF SCIENCE MAGAZINES EDITOR

AAAS attendees bought many copies of a little salmon colored pamphlet entitled CENSORED. The pamphlet describes the censoring of an article with the title, Science for the People, *that four members of SESPA from N.Y. and Chicago had submitted for publication. The article is a modified and extended development of the ideas in the* People's Science *article in* Science for the People *vol. III no. 1. The story of Philip Abelson's heavy-handed censorship is reprinted below.*

The following article was censored out of the pages of *Science*, not a few paragraphs or a blue-penciled phrase here and there, but the entire article. The journal's editor, Philip Abelson, performed the surgery single-handed, against the advice of colleagues and in violation of precedent in effect for decades.

The censorship story begins at the 1970 meetings of the American Association for the Advancement of Science, held in Chicago. Science for the People activists distributed a mimeoed 10-page paper there which described the political and economic impact of scientific work in North America and tried to outline a program for integrating science and social change. In spite of the existence and free distribution of several thousand copies of this paper, the activist group at this AAAS meeting was criticized for not issuing a detailed and public statement of its analysis and objectives. These attacks not only ignored the paper, but also the bimonthly publication, *Science for the People,* and many other pamphlets, which were available throughout the meetings.

In any case, several of us decided to expand the original 10-page paper and to submit it to *Science* for publication. This was done in February, 1971, and shortly thereafter the new version was rejected and returned to us with criticisms rather unusual for a scientific journal. Disregarding editorial comments that questioned our integrity, our intelligence, even our sanity, we decided to drastically revise the paper in one final attempt to communicate with the massive readership of *Science.*

The final version of the paper, the one you are about to read, was sent to *Science* in June. (The following information concerning its fate within the *Science* bureaucracy was supplied to us by a staff member of the journal, along with copies of the referees' reviews, which are available for examination by any interested party.) In accordance with the customary procedure, the article was submitted to three referees, chosen by the editor, Abelson. The referees unanimously advised Abelson in favor of publication. Many reasons were cited. Among them (excerpts):

> [The article] *is an important position in the debate over the objectives and public responsibilities of science which* Science *magazine has been encouraging for several years, with many major articles supporting the opposite points of view . . . .*
>
> *If it is not published in* Science, *it would mean that* Science *is not representing the full spectrum of opinion in the scientific community, and would drive this whole segment of opinion to other media or "underground" . . . .*
>
> *. . . is interesting and well-written . . . . [It] is a statement that frankly takes sides; yet in an area in which other points of view are well represented, and most readers are likely to be meeting the attitudes presented here for the first time . . . .*
>
> *. . .is extremely welcome and perhaps even overdue. It should be given top priority for publication. It represents a serious attempt to explain in detail the analysis and some of the proposed directions of this* [Science for the People] *movement. The readers I think will be somewhat surprised that the authors deal with real change and program rather than disruption and confrontation. The pages of* Science *have been used for discussion of the relation between science and politics in the past so there should be no hesitation with regard to the relevance of politics in the magazine . . . .*

For some reason, Abelson felt that a 3-0 unequivocal decision for publication by the referees was not quite conclusive enough. So he took it upon himself to take the unusual (!) step of sending the article off

to four more referees; all of whom, by the way, happened to be on the editorial board of the magazine. But Abelson's disappointments were not yet over. Two of the four hand-picked extra referees broke ranks and advised in favor of publication. Their praise, however, was somewhat less encouraging than that of the original three referees. For example:

> *This is an idiotic paper which should be published. This position is taken by crackpot radicals who, unfortunately, make up a significant part of our students and junior faculty these days. These authors present the crackpot radical view of science conscientiously and effectively. I think it should be published as part of the documents of our era; because we are liberal and make room for all views . . . .*

The two extra referees favoring rejection made the kind of inspiring criticisms that many radicals have grown accustomed to:

> *Anything I say, and anything that anyone I regard as perceptive will say, is bound to be unsatisfactory to the authors, who, in regarding the inward voice and the inward vision, catch only pale and fleeting glimpses of what lies outside of themselves. I think you'll have to turn the paper down cold. Doctrinaire fanatics are not open to argument or conviction.*

> *. . . is not a scholarly work nor a thoughtful exposition of ethics. It is rather low quality propaganda.*

At this point our beleaguered editor, Abelson, faced a 5-2 decision in favor of publication. He apparently lost faith in the tactic of recruiting additional referees, and decided, in August, on a more reliable approach. Invoking his editorial (dictatorial) prerogative, he simply rejected the article.

We do not intend to allow the powerful within the scientific establishment to prevent us from communicating with our fellow scientific workers. Here then is our article, published in pamphlet form at a personal cost of several hundred dollars, some of which we hope to recover through your donations. In any case, we urge you to consider the meaning of freedom of speech when those whose ideas are threatening are denied access to the press and other means of communication. Those who insist upon being heard in spite of such denials are often the ones wrongly accused of violating that principle.

It has been our experience that speech cannot be free in an environment of exploitative profit and concentration of power. Freedom of speech, reasonable access to the avenues of communication, are limited. The limits are the rules of the established game, the set of prior assumptions one must accept in order to win the "freedom" to move around within the limits. One of the rules is that political change must occur in an orderly fashion, orderly enough for the powerful to retain, or even extend, their power while appearing to relinquish a portion of it. Try and advocate the kind of political change that would really undermine the powerful – your liberal freedoms will dissappear into thin air and you will find yourself standing under an umbrella of ordinary repression.

The lesson of Vietnam has been learned by the functionaries and managers of the United States, by people like Philip Abelson: if you cannot effectively deal with an opponent through persuasion or compromise, use force. But there are other lessons of Vietnam. B.Z.

The pamphlet CENSORED, *which contains the above, and the 18 page article* Science for the People *written by Zimmerman, Radinsky, Rothenberg and Meyers is available at 25¢ each, or at reduced rates for quantity orders, from*

Science for the People
9 Walden St.
Jamaica Plain, Mass. 02130
(617) 427–0642

A PLUG FOR *SPARK*

SPARK, the quarterly publication of the COMMITTEE FOR SOCIAL RESPONSIBILITY IN ENGINEERING, can be obtained by writing 137A West 14th St., New York, N.Y. 10011.

Engineers face today increasing unemployment and job insecurity, conditions that stem from misguided national priorities. Thousands of engineers feel that their engineering talents are misused in both civilian and military projects, and believe that the constant development of weapons technology spells ultimate disaster for mankind. The COMMITTEE FOR SOCIAL RESPONSIBILITY IN ENGINEERING seeks to challenge the present orientation of engineering and to explore ways in which engineering skills can be used to solve the obvious and growing ills of our society. It is essential that we end unemployment and pollution and provide adequate medical care, housing, education, transportation, and communication systems for all people.

Subscription Rates: $10 annual; unemployed $2; student $5; broke $1; affluent more than $10.

LETTERS

Dear friends,

Enclosed is a money order for $10 to cover membership fees in SESPA and a subscription to *Science for the People.* I am a biologist who used to work in the field of mosquito ecology and systematics. The high-class flunkies for the Defense Department-AID-Oil Industry cabal at the Harvard Department of Tropical Public Health very politely and bluntly gave me the choice, during the tenure of my post-doctoral there in 1967-68, of dropping my opposition to their misuse of science for imperialist ends, or face having them do all they could to prevent me from working in my field. I wish I had known of your group then.

For the past three years I have gone through the various stages of being fired, here at San Jose State College, in part due to the kindly intervention of my former Harvard associates. Except for that, my troubles are similar to those of many other California State College Professors.

Sincerely,
W. G. Iltis
San Jose, California

The above letter describes a practice that, judging by other stories we have heard, may be more common than we realize—the hounding of radical graduate and post-doctoral students even long after they have left the fold. That radical graduates get poor letters of reference from hostile reactionary or liberal faculty is not so surprising, and perhaps even unavoidable. However, that some faculty should follow the careers of their radical graduates and gratuitously provide derogatory statements about them, whether by uncalled-for gossip at scientific meetings or by unrequested letters or telephone calls, is a highly unsavory practice that ought to be combatted by all of us, traditional and radical scientists alike because it functions with the same effect as a blacklist: it unjustly deprives people of their livelihood. To determine the extent of this practice and to expose it we need more information. Please write Science for the People *describing any similar cases of radical teachers or other scientific workers being harassed professionally by the faculty of the institutions at which they did their graduate or post-doctoral studies.*

Dear Al,

I was glad to see your "Land" article in print last week (in[someone else's] copy of *Science for the People* I must confess, since I have not yet sent my $10 and have finally been purged from your subscription list—I hope that the enclosed check and assurances of more rigorous self-criticism will rehabilitate me.)

Paul and I recently met Dave Kotelchuck and the group of N.Y.C. scientists with whom he is working on "industrial hazards." They have set up (through contacts with the Oil, Chemical, and Atomic Workers Union) a course on in-plant chemical, mechanical, etc. hazards, their effects and techniques for monitoring which is being attended by 60-70 N.J. workers from various plants. They have also been investigating several N.J. plants with worker assistance. Perhaps you are already in touch with Dave on this—it would seem to be appropriate material for an article which could turn other groups of scientists on to this kind of political work on an important and explosive (!) issue. The environment problem really comes home to roost here! Although I am not immediately able to hook up with Dave's group, I am sending people his way*. . .

Steve Bernow
New York, N.Y.

**For Dave Kotelchuck's address check our list of contacts in the back of the magazine.*

Dear Sirs,

I am doing a Science report in April on bones. I would like to know if you could send me some information on bones if you can. I am hoping very much that you will send me some information.

Thank you so very much,
June Garrabrant
Somerville, Mass.

Dear Friends:

I wish to join SESPA and subscribe to *Science for the People.* Please find enclosed my check for $10.00 to help defray costs. If necessary I will send more.

I also wish to receive 30 copies of Zimmerman et al, *Science for the People*, December, 1971, for my course in Conceptual Foundations of Psychology.

Incidentally, I have been following your progress since AAAS in Boston two years ago and feel I should lend some modest support.

Love,
Steve Anderson Platt
Northern Michigan University

MORE LETTERS, page 30 . . . . . .

MATHEMATICS IN CHINA AND VIETNAM — WHAT CAN WE LEARN?

Chandler Davis, a mathematician at Toronto, visited Vietnam and China a few months ago. Below we present excerpts from some material he sent us which describes the practice and attitudes of the Vietnamese and Chinese mathematicians. Chandler is primarily concerned with the question of what we can learn about our own practice from our revolutionary sisters and brothers in Asia. He finds, not "answers to our problems," but "a new view of the questions."

Let science serve the people!
Work to serve revolution, not to serve yourself!
Culture must belong to the masses, not to an elite!
Full equality for women!
Full equality for national minorities!
End the worship of foreign models!
Make the past serve the present!

Though the phrasing varies, these simple principles are constantly referred to by the Vietnamese and Chinese —not just in explaining to the foreigner but also in conducting their own affairs. Notice there are no slogans "Protect academic freedom" or "let students make the decisions which affect their own lives": the principles of the academy's immunity from outside interference and of local participatory democracy, however prominent in American rhetoric, are unheard of in theirs. The principles they do state are quite familiar in the West. They are supported by the Soviet-bloc Communists, and (except the one about "foreign models", which is irrelevant in those countries like the U.S. and France which set the fashions) they are current in our own left.

How well do they live up to their stated objective? Can we borrow from them where they have succeeded? No—even the successes are to be understood rather than copied.

Mathematicians in pre-revolutionary China had a pattern of study, publication and appointment to professorships which was roughly modeled after the West; mathematicians in North Vietnam still model their research activity largely on the USSR and France and thus tend to accept research papers with named authors as an important index of it. Nor is competition an unassimilated recent graft. Both countries had for many centuries a powerful civil service which was entered by a competitive examination. Granted, the enormous majority remained illiterate and without hope of becoming mandarins; still, a Vietnamese mathematician says it was important to have the tradition that learning had rewards and was measured by an exam. How do mathematicians in socialist Asia reconcile these individualistic forms with the surrounding collectivism?

They are *not* as competitive as we are: generosity between peers comes easily. I observed this among Hanoi analysts, and I believe the reports that undergraduates also help each other so that almost no one is left behind.

But it is in China that a sweeping answer is attempted. The Cultural Revolution aims to eliminate bourgeois individualism from university life altogether. It is quite an experience to hear the mathematics group at Futan University in Shanghai describe the remolding of the old professors. From the non-mathematician members of the Mao Tse-tung Propaganda Team and the young students, to the most august professor of all, Su Pu-ching, they join in deriding the old ways. "I used to say that just because a man had passed all our tests and finished his degree, he was entitled to special freedom and a higher standard of living," says Professor Su with mock incredulity. Or he chuckles, "You know I just wanted to write anything that would be publishable. If my method wouldn't solve a problem, I would change the hypothesis until it did."

As the group approaches the rebuilding of Chinese mathematics in its new socialist form, are the old-generation mathematicians trusted? They are members of a heterogeneous group which works together intimately. On the other hand, they are stated not to have completed their re-

molding; they are assumed still to have a lot to learn from their students and other real revolutionaries in the group. The Cultural Revolution has followed its policy of "killing none and arresting most"(Lin Piao) toward the ideologically backward professors; but all professors seem to have been classified as ideologically backward—after all, they were all living by the norms of the old-style university—and all must have been made pretty uncomfortable in the process of rectification.

The senior Vietnamese mathematicians have some old-style prestige symbols and have not been stigmatized as bourgeois; their university administrative structures (having no students or outside agitators) may give them fewer reminders of any contradiction with the principles of the society. They are concerned with the question anyway, and uncertain what the structures should eventually become. Though I see no sign of North Vietnam undertaking drastic measures like the Cultural Revolution, I *have* seen Vietnam make some remarkable achievements with remarkably little fuss, and it would be consistent if it quietly and continuously and without recriminations developed a new and co-operative way to carry on mathematical study and research.

The Viet Minh, during the Resistance against the French (1946-1954), built up a whole system of education. They started from very slim resources: there were few Vietnamese with advanced education, and many of them were "francises" and remained behind French lines (along with most of the books). The educators began with a literacy program, and worked upward, training a new teaching corps and writing a new set of textbooks in Vietnamese. I don't know how much they benefited from the similar effort of the Chinese Communists in the period 1937-1949. But there was a significant difference: the Chinese after 1950 took over the university system which had existed in the Nationalist cities and welcomed a stream of returning emigres, whereas the withdrawal of the French in 1954 left almost no teachers in the Hanoi schools. The present North Vietnamese educational and scientific community is descended entirely from that which developed in the Resistance

I asked the North Vietnamese about the class structure of their intelligentsia. In the early years, needing every literate teacher they could find, they drew most of them from the tiny minority given opportunities under the colonial regime. From then on, students were recruited from the whole population. "Our country is 80% peasant, of course our trained personnel come mostly from the peasantry." They never had the painful problem of keeping out privileged children in favor of proletarian and peasant children, which was seen in the USSR, later in Eastern Europe, and in a different form now in China. Nor are they concerned about the possible separation of a new educated elite: after all, entrance to higher education is by competitive exam, and enrollments are still rising much faster than population. The emphasis is on growth, on achievement by the available means, and the intellectuals come from those willing and able to become intellectuals.

The achievement is impressive. Already during the American air war on the North, Laurent Schwartz reported that North Vietnam was one of the few poor countries which, if it could get the material products of advanced technology, would have the technical training to put them immediately into use: their educational development has outpaced their material. They did so well by virtue of their great unity and dedication behind Ho Chi Minh. That in turn depends not only on the quality of leadership (though that was undoubtedly high), but on the nation's memories of the ungentle French, on the experience of the vicious U.S. attack—and on the fact that those middle-class Vietnamese who chose to make their peace with the colonial powers did so, and removed themselves from internal politics.

It is easy to imagine that the Vietnamese may be far less casual about the class composition of their student body after the war—at least in the South, where the simple society of the liberated zones will have to absorb the demoralized refugees and collaborators of Saigon (a much larger and less digestible addition than was in Hanoi in 1954), and where professors from the liberated zones may find themselves outnumbered on the faculties by professors now in Saigon or Paris. My friends in Hanoi are sure there e will be a rush of emigres to return, and they welcome them. "Vietnamese got along together much better than foreigners think," says the mathematician Hoang Tuy; "aid to Vietnamese culture is aid to us." They welcome the present Saigon professors and expect them to work loyally for the new independent country. At the same time they emphasize that the South will need to develop its own institutions, supported by but independent of theirs.

I have yet to mention the principal sense in which mathematics is being brought to the masses. Not only students are educated, after all. Vietnamese mathematicians figured out how to apply modern techniques to problems of Vietnam's present technology, but they had no motive to restrict the understanding to themselves; they set about spreading it to every technician who could apply it, whether he had advanced education or not. Vietnamese intellectuals were kept in touch with the uneducated by the needs of survival during the Resistance and the bombardment. Chinese professors had to be turned out of their campuses by their own sense of duty to the Revolution, or failing that by the insistence of the Red Guards; but by now they too have all had a total immersion in the life and needs of the workers. And they tell similar stories about the wide dissemination of modern applicable mathematics.

The "new students" in China—those now on campus, admitted after the Cultural Revolution—are thought of as seeds of such dissemination. Not only have they all been sent to the university by their factory or farm work units, they are mostly to return to the same units. Fraternal relations are encouraged between scientific institutes and nearby factories, serving the same purpose.

Unity of work and study is held up as a principle in North Vietnam too. A few special work-study secondary schools, both rural and urban, have existed for ten years;

they are model institutions where dedicated young people (a) run modern productive units, (b) spread the modern methods to nearby workers and learn from them, and (c) complete the full secondary curriculum, preparing for the same nationwide exam as anyone else if they want to go on to post-secondary education. A significant fraction of Hanoi students will play the role of disseminating culture after graduation: thus most mechanical engineers will be working in less industrial areas, and the thesis projects which I saw were working machine tools of a simple versatile sort.

To teach the simplex method or differentiation to a busy carpenter requires new methods. For one thing, he [or she?] will be impatient. For another, he [she] is not trying to prove himself [herself] to you. Better not jiggle promised rewards out of reach and prod him [her] to jump for them, he [she] might just not bother. Better let your proofs be proofs of effectiveness.

Does it follow that where great emphasis is put on immediate usability, a cookbook approach will replace understanding? This is sometimes said to be unavoidable in rapidly modernizing societies. The Vietnamese are clearly rejecting it. The Chinese Cultural Revolutionaries, while iconoclastically encouraging the new students to play the role of the skeptical carpenter even on campus, are not downgrading theory. They *are* doing something which might be called equally anti-intellectual: seeking the "real" theory, the "real" understanding of mathematics in the operational testing of the applier rather than in the testing-for-consistency of the rigorizer. I find this program hopeful. Anyway, when the whole mathematical community of a country embarks on a re-examination of fundamentals (even though it was political agitators who put them up to it), something interesting should result. But it will clearly be months or even years before they will be able to tell us anything definite enough to take hold of.

Meanwhile mathematical research in China consists mostly of solutions of concrete problems of production. Recreational mathematics and puzzles? special topics for enrichment of elementary subjects? additive number theory? I do not know.

I am left, after my visit to the Orient, not with answers to our problems, but with a new view of the questions. For instance—How much of what we teach to non specialists would be any use to a. Vietnamese engineer? to anyone? If we set out to tell the Vietnamese engineer something he really needed to know, what might it be?

How much of the scant attention students pay to what we *do* teach is motivated by its role in certifying them for admission to unearned privileges? On the other hand, are we sure we can do without any selection of a corps of adept mathematicians? If the Chinese try to do without competitive exams in mathematics, will they find they are teaching the subject to students unable to learn it?

One idea underlying the New Math has been to teach everyone a stance and methodology (rigorous proof) thought appropriate for testing novel propositions' validity. Even if the stance and methodology are appropriate at the frontier, does it follow that they are an appropriate way to relate to an established body of knowledge?

How much of mathematical research can be called productive labor? Bellman calls it a criminal waste of resources to train algebraic topologists. Maybe some activities intolerably wasteful in Vietnam are justifiable here; and conversely. Then too—in our society, where much production (especially the "advanced" sort) goes to destructive ends, do we *want* to work productively? If so, why, and how? If not, why should we accept high salaries? If we forego high salaries, and hence choose our labor uninfluenced by university standards, will we then be able to think of really useful work to do? Will it be mathematics?

C.D.

CHAPTER REPORTS

REPORT FROM MADISON

Our sisters and brothers in Madison have recently put out another SCIENCE FOR THE PEOPLE newsletter (January, vol. 2, no. 1) containing lengthy reports on the Madison Science for Vietnam Forestry Project, the Honeywell Project, and the AAAS Convention. We thought our readers would be interested in reading the following item entitled, "A Letter to Hanoi."

To our Vietnamese Comrades:

We of the Madison branch of Science for Vietnam extend to you our warmest greetings and our best wishes.

When we learned from Richard Levins of Chicago that he was initiating an American Science for Vietnam program we were very excited. We felt this was an opportunity not only to express our opposition to the Indochina War, but also to engage in active support of the people of the Democratic Republic of Vietnam. Science for Vietnam provides us with an opportunity to question the neutrality of science, to question the isolation of scientists from society, and to demonstrate to our colleagues that scientific activities can be performed in collective and non-capitalist ways. The majority of Americans, including scientists, believe that only the experts are capable of making decisions about technical and scientific problems. We felt it important to work in areas where we lacked a formal background so that we could show the capabilities of the non-expert. By collective action, group discussion and mutual criticism we hoped to overcome our individual weaknesses.

We are pleased to send a selection of publications on the recent advances in the treatment of Tuberculosis. This consists of 28 publications with one major review of the chemotherapy plus additional detailed papers on new drugs in use. We also included some papers on Tuberculosis management in "underdeveloped" countries and a paper on Tuberculosis statistics in South Vietnam. We have concentrated our efforts on two drugs, namely, rifampicin and ethambutol, and have been able to secure a small sample of each to include with the publications. We sought out information that studied the comparisons of the effectiveness and toxic reactions of the new drugs with the more conventional medications that have been used up to the present. In the event that you do not have any supplies of the two drugs mentioned above or that you have no way of obtaining supplies, we have included publications that indicate their method of synthesis.

We are aware that information on the chemotherapy of Tuberculosis was not one of the requests made to the American Science for Vietnam group, and we would like to explain how we came to decide on this project and how we carried it out.

Several weeks ago we learned from the Chicago branch of an appeal for antibiotics from the D.R.V. Two of the drugs requested were streptomycin and isoniazid, which are commonly used in antituberculosis therapy. We were aware of the seriousness of this disease in Vietnam and we were also aware of the problem of acquired drug resistance to established antibiotics. In group discussion we elected to work on the more recent therapeutic agents in the event that you had little information along these lines. We understood of course, that you might already possess considerable information and experience in this field, but we felt that additional data would also be help-

NEEDED
for struggle against U.S. Imperialism

1. *Oscillograph*—of type "Oscillofil 18" (Siemens S.A.F., French), requested by Laboratory of Theoretical and Applied Mechanics attached to the State Committee of Science and Technology.
2. *Microbiological Stamps*—of Bacterium, Fungus, Actinomyces of economical interest that produce antibiotics, vitamins, enzymes, aminoacids, hormones. Also typical stamps for microbiological classification, requested by the Biological Faculty of Hanoi University.
3. *Seismographs*—having free period of one second such as APX(France), Benioff(USA), or HES-1-02(Japan), with galvanometers, seismo-recorders for three stations and chronometer for one, requested by the Institute of Natural Sciences of the State Committee of Sciences and Technics.
4. *Lamps for Atomic Absorption*—Unicam. Al, Ag, Au, Be, Cu, Co, Cr, Fe, Ge, Hf, Mn, Mo, Nb, Ni, Pd, Pt, Rh, Si, Ta, Ti, V, W, Zn, and Zr, requested by the Institute of Physics attached to the State Committee of Science and Technology.

The above items are samples from an extensive list of scientific materials requested by the Vietnamese to equip their schools and labotatories. To obtain the complete list, write Science for Vietnam c/o Science for the People, 9 Walden St., Jamaica Plain, Mass. 02130 or call (617)-427-0642. Any item you can provide will be appreciated.

ful. If there are any topics of specific interest on which you would like further information, please let us know for we would be most pleased to help out.

We have begun a new project on forestry management, and we hope to have this completed in a few months.

We will continue with our work in the hope that your country will soon be free of the U.S. military aggressors, and in the hope that we may soon see an open exchange between our two peoples.

In solidarity,
The Madison Collective
Science for Vietnam

Copies of the Newsletter can be obtained by calling Robin Dennis (608=256-8752) or Lorne Taichman (608= 231-3155) or by writing the Madison Group, c/o Joe Bowman, Teaching Assistant Assoc., YMCA, North Brook St., Madison, Wisc. 53715

AAAS NOTES: OBSERVATIONS FROM CHICAGO

The following excerpt is taken from a letter written to Science for the People *by someone from Chicago who participated in the AAAS Actions. We encourage others to write in their criticisms.*

One observation is that whether by habit or design, most of the war protest was styled for media consumption. But lacking was a thorough discussion of goals at the week's outset. The media's attention was successfully drawn, but there were no priorities as to what content to impart (the PRG's seven points? individual moral outrage? war crimes? history of the war?) and therefore poor group discipline. Most news reports of the Bundy session carried only the circular chairs, one war crimes question, fighting over the microphone, and a quip from Bundy that the heckling was not too high-brow. The Bundy session could have been an opportunity to have emphasized and repeated for the American public the crucial matters of total troop withdrawal by a set date, exclusion of Thieu/Ky from a coalition government, etc. To have allowed private sentiments of rage to run Bundy off the stage and thereby take precedence over elemental public education was self-indulgent.

A second observation is that interest in the rank and file of the AAAS as a possible constituency was low. Choice of tactics shows this. For example, why not organize a mass walk-out on Humphrey? Why not have respected the vote outcome in the Bundy session, i.e. one hour of crossfire, then return to the regular talks—especially when further questions were scheduled at the end? Reports from the few groups that had encountered people in idea exchange in the small AAAS seminars had been encouraging, but this was not tried on a wide scale.

Obviously the resumed bombing of North Vietnam (had the continuous bombing of Laos been forgotten?) made the air war high-profile again so it was urgent to make a media impact to re-awaken dormant consciences coast to coast. But overlooked was that simultaneous political education among and inclusion of the AAAS rank and file might have produced a stronger result. In many ways, scientists are like GI's, whose skills, as necessary to the survival of the empire, must be denied to the military-industrial what-all. Personal style, egoism, or undiscipline that interferes with this cannot be afforded. A.F.

REPORT FROM WASHINGTON

The Washington Science for the People group was beset by a number of problems last summer. Our mailing list consisted of professional scientists in government and universities, and some students. Some were dropping out of science because of the misuse of science or the frustration of trying to organize scientists. Some were doubtful about the kinds of AAAS tactics they'd read about in newspapers last December. And some of the more activistic "young professionals" were absorbed in setting up a Nader-style science center.

In addition the previous year's activity had brought out our inexperience. We had sometimes alienated less radical people by preaching to them, and demanding a certain purity of consciousness. And probably worse, most of our meetings turned into rap sessions with no follow-up actions. It seems that part of the problem has been that our bourgeois education leads us to philosophize but not to act. Thus many people left meetings when no action was taken while others remained paralyzed.

This past fall, however, we became more active by spreading the *Science for the People* magazine, organizing a group at George Washington University, working toward and participating in the AAAS 71 actions and setting up literature tables at other conventions. Attempts were also made to help Marion Barry (who left graduate school in Chemistry and found more significance in creating self-help programs for Black people in Washington, D.C.) get elected chairman of the D.C. Board of Education.

As the new year starts SESPA-D.C. is completing an initial phase of organizing in which our main concentration is on getting *Science for the People* to the people. By spring the magazine will be on consignment in a dozen bookstores and complimentary literature will have been sent to several thousand people. Attempts are being made to place the magazine in public institutions. Another emphasis at this stage is to create groups based in several working and educational areas. We have started or have contacts in nine area institutions. Our hope is to be involved in educational programs and some technical assistance projects by late spring.

SESPA-D.C. established a collective to provide a base for Science for the People activities while bringing interested people together in a living and working situation. We will struggle with our elitism, racism and sexism on a personal and institutional basis. If you are planning an action in D.C. and/or need a place to crash, then drop in. D.A.

REPORT FROM ST. LOUIS

The St. Louis Radical Ecology group and friends sought to provide some radical perspective amidst the deluge of material at this year's AAAS meeting on the general questions of pollution, environmental decay, and natural resource management. The symposium we presented was entitled "Radical Approaches to Ecology: the Economics and Politics of the Automobile." In the sessions we wanted to show by analyzing one industry in particular—the automobile industry—how the economic system as a whole is the source of the environmental crisis. Our perspective was that the ecology question could not be separated from the broader political and social crises of advanced American capitalism.

The ecological problem of course extends beyond the mere consideration of how to clean up pollution and waste. It raises the question of how resources are utilized, who makes such decisions and on what basis, and under what forms of production these resources are consumed. Thus, natural resources must necessarily include human resources and the environment must necessarily include the social environment. The ecological problem emerges as one of the contradictions of America's advanced state of productivity and the political system to which it is coupled.

Our study of the automobile, and automotive pollution, brought all these considerations to the fore. For example, it was shown in one session that the U.S. automobile industries consume large percentages of the world's supply of bauxite, copper, nickel, zinc, manganese, and lead to produce cars for only a fraction of the world's population. The decision to use these resources in this way is dictated by the needs of the automotive industry for growth and profit. Thus the allocation of resources is based not on a rational level in so far as human needs are concerned but on the irrational growth dynamics of the economic system. The power of such corporations to allocate natural resources amounts to a *de facto* disenfranchisement of the world's population.

Then too we had to consider the system of American imperialism by which the labor of third world peoples is exploited in order to make the automobile business profitable; and further, the dehumanizing and alienating production line conditions of workers in the auto manufacturing plants here in the U.S. Two workers from the Black Caucus of the UAW in St. Louis described, for example, the health and psychological effects on workers' lives of working in an automobile plant. We pointed out also the direct effects of auto pollutants on human health, emphasizing the special burden of such problems on the poor who are concentrated in the urban areas.

Our symposium attempted to show how the present form of decision-making by large corporations, the exploitation of people and resources, and the ecological problems which some people in the U.S. have begun to worry about, are all necessary outgrowths of the capitalist economic system. An economist argued that capitalism necessarily involves continual expansion, and that competitiveness leads to always seeking the cheapest and most readily available source of raw materials, regardless of its effects on the natural or human environment. Our main point here was to show that lasting solutions to the world's ecological problems are not to be found, for example, in building better catalytic converters or afterburners for automobiles. That approach touches on only one small aspect of the auto's ecological disruption, and fails to strike at the root of the problem.

As an alternative approach we discussed some of the things being done in the People's Republic of China. One of our group's members, who had recently (summer 71) spent three months there, contrasted the use of resources in Hong Kong (exemplary of capitalist forms) with that in Shanghi. He outlined the way in which the social and economic order of the People's Republic makes possible the rational use of resources, and thus prevents the kinds of environmental disruption so characteristic of capitalist countries. The Chinese ethic was to turn "wastes into treasures."

The Radical Ecology Group aims to prepare the materials presented in Philadelphia in several forms to reach audiences which the movement does not now reach in great numbers: workers, consumers, and high school students. We have the following specific plans in mind: (a) To present most of the material organized for Philadelphia in a well-documented and complete form (as a short book) for use by university classes or political education groups; (b) A shorter book, less detailed and annotated, for use in worker groups, by high school students, or the general public; (c) A slide or film presentation; and (d) An educational packet for specific use in schools. Particularly important, we feel, is the extension of this analytical approach to other industries, such as the aerospace-electronics industry. Such case studies could be particularly useful in worker-organizing efforts. We have found that our material on the automobile can be of great value to the Black Caucus workers at St. Louis' GM plant.

G.A., member, Radical Ecology Group

BROTHER HOLLIS WRITES FROM KANSAS

Comrades,

I've finally gotten around to writing you! This letter is to clear up a couple of technical problems, to communicate the progress of our group, and to raise some questions we'd like to see SESPA groups, and other people discuss in the magazine.

Some notes on the progress of our group. We met weekly all summer (5-8 of us) as a study & discussion group. By the end of the summer, we had pretty much come to collective agreement on the following points (as we presented them to some new people this fall):

1. Science for the People—The purpose of science is to benefit people. This is an assumption we are all operating from.
2. Science is a tool. The scientific method, when not applied superficially, is one of the best tools people have developed for solving problems. We believe it should be applied to the social world, as well as to the physical world. Science is not an end in itself. It cannot be separated from the uses to which it is put. Hence,
3. Science is not neutral. It does not function in a vacuum. The development of science—it's magnitude and direction—has been affected by the social reality within which it has developed. And science has transformed society as well. Science is political.
4. Even basic research ("pure" science) is political. The knowledge gained thru it is eventually put to use, and the time lag between a basic scientific breakthrough and its application is getting smaller all the time.
5. In America today, science is being misused in many obvious and scary ways—to oppress people rather than to benefit them. Also, science is *not* being used to benefit people in many ways that it could be.
6. One of the reasons this last point is true is that the process by which decisions about the development and use of science are made in America is not a democratic one. A very small group of people—essentially Big Business, the military, and a few people at the top of the scientific hierarchy—have complete control over the direction of science.
7. Modern science & technology has been mystified to where the vast majority of people are overawed by it and feel powerless in the face of it. This is not necessary, and it contributes heavily to the lack of democracy.
8. The myth that science is neutral is built into the present system of science education, and this leads to the deveolopment of scientists (we use this term loosely to refer to all types of scientific and technical workers) who create or apply scientific knowledge and then fail to assume (or try to assume) responsibility for its use. This also means those who carry out the scientific work are in general denied freedom of choice in what to work on and are denied control over both the work process and the products of that work.
9. The composition of the American labor force is undergoing tremendous change. Highly-trained and skilled scientific and technical workers are becoming a much larger percentage of the work force. This has several implications:
   a) Scientific workers are becoming more and more subject to the whims of the economic market place (and the whims of their bosses) in the same way that blue-collar workers are—as exemplified by the present employment crisis.
   b) The myth of the scientist as a member of an intellectual elite is beginning to slowly break down. In the past, the "value" that intellectual work is "superior" to manual work has caused scientists to identify with the much smaller elite that really controls things in our country.
   c) Science and technology, and those who produce them, are playing a more integral role in the productive process in America. The work we do contributes to the creation of surplus value. This means our potential power to bring about social change has increased.
10. Traditional and individual attempts to reform scientific activity or to disentagle oneself from its more malevolent and vicious applications have proven their inadequacy.

In the long run, we believe that two general approaches would be most effective in bringing about change. One is the deveopment of "alternative" institutions and styles of work that begin to build a real "science for the people." This is of course extremely difficult to do as almost everything about the present scientific and social systems of America work against this. The two main problems are:

(1) Having been trained by a system of science education that is geared towards an elitist science that is at the service of the corporations and military, how do we re-educate

ourselves to be able to do the kinds and styles of work that people really need? How do we demystify science—both to the people we want to serve and *to ourselves?* (2) The problem of resources—time, energy, money, equipment. How does people's science get financed—for equipment and manpower? How do we find the time and energy to work at our "regular" jobs to support ourselves and then still be able to do people's science on the side? Or, do we try to find "regular" jobs which, altho they are in the "establishment" are on scientific work that has progressive implications? Is this last approach possible? We've talked some about possible solutions to these problems, but have been able to do very little yet. One thing we are trying to begin to do is put our scientific skills to the use of movement groups. It is very important that this be done. So far these attempts have been pretty much limited to educational help as opposed to actually *doing* something—due to lack of resources. How can this be expanded? We've also fantasized some about the possible development of science collectives that would try to develop into self-supporting people's science organizations. Let us hear ideas and actions other people have developed about people's science.

The second major long-run approach we see as being most important could be called the radical unionization of scientific and technical workers—for that matter, of all workers. We don't mean unions in the traditional sense at all, as we feel that trade unions in America have pretty much developed into merely being the labor relations arm of the corporations. Their function is primarily to discipline their members for the bosses. Rather, we mean the building of organizations of workers that can engage in collective struggle, both economically and poitically, and not thru bargaining, with those in power to bring about radical social changes. This is probably more important than the development of People's science—both on building of organizations of workers that can engage in collective struggle, both economically and politically, and not thru bargaining, with those in power to bring about radical social changes. This is probably more important than the development of people's science, as it is thru such organizations that we can force the changes necessary to bring about people's science—both on a small scale at first and in all of science eventually. At first, these organizations would vary widely, depending on conditions. There could be "unions" of white collar employees in a particular corporation or industry, groups that combined scientific and technical workers with some or all of the blue-collar workers in a corporation or industry, organizations of government employees, of teachers, of students. Or perhaps such "unions" could arise out of a radical transformation of some of the present "professional" societies. The power of such organizations lies in the fact that they can engage in direct struggle *at the point of production*—and such struggles should be for *control*—control of what work gets done, control of the work process, control over what happens to the "products" of the work. We would like to stimulate discussion and correspondence among radical scientific workers about these ideas. How do other people see things in terms of long-run strategies?

Now the question becomes how to bring about these long-run goals—how to do the necessary organizing? This is the area that most needs development and discussion. Probably most radical scientists would more or less agree on the analysis of the present situation presented above. And we can all probably agree on an overall picture of the kind of society and scientific structures we'd like to see. But we've only begun to figure out how to get from the way things are now to the way we'd like them to be.

This is why I really dug the letter you printed in Vol. III, No. 5 from the person who spoke at Pfizer, and Herb Fox's reply. I'd like to see more. And we should go into the kinds of small, everyday detailed problems that come up in organizing work. So far *Science for the People* articles seem to do this better than most radical magazines, but a lot more discussion is needed. Don't say: "We organized such and such kind of demonstration at so-and-so a place." but "We organized a demonstration of this kind for these reasons by doing this and that, and we encountered these problems and tried to deal with them in those ways, and here's what we learned for next time." There also seems to be a slight tendency, very prevalent in the large movement, to go in for the glamourous "big-deal" activities as opposed to the kinds of day-to-day, long-term, local organizing *work* that is the basis of everything else. Let's hear more about this kind of work.

A lot of what we have to do initially is consciousness-raising among scientific people. We've come up with the following kinds of things we can all do:

1. Each of us, individually and collectively, can begin immediately to take responsibility for the social consequences of our work, in whatever ways we can find to do so. This is the seed of larger *direct* struggles for control.
2. We can begin to challenge our colleagues to do the same thing.
3. We can raise questions of social control and social consequences of science at every opportunity—at the workplace, in the lab, in the classroom, in seminars and department meetings. Most discussions never touch on these fundamental social questions but merely on purely technical questions. We don't have to accept this passively. Why are these technical matters under consideration in the first place?
4. We can begin to explain and demystify science to our friends and other people, so that it can be brought within their understanding.
5. We can study and educate ourselves on the political, economic, and other social functions of science. We have all gone thru a science education system which ignores these questions, and therefore, we have much to learn.

It is in this type of informal activity that we have been most successful to date—mainly because it's about the only type we've been able to do. One of our people is a graduate student in medicinal chemistry. He did some reading on the drug industry during the summer and want-

ed to present some things about it to his department. It would of course be quite appropriate for a department of medicinal chemistry to discuss the functioning of the drug industry since the primary purpose of medicinal chemistry departments seems to be the training of researchers for that industry. The details of how this talk came about and what were its results are quite interesting. (This will not be an exact recording of the events, but will be a pretty good facsimile.)

The Kansas University medicinal chemistry department has weekly departmental meetings required for all grad. students and faculty. These meetings are normally concerned with discussions of research work and proposals, preparation for exam and problem sessions for the students, and the like. Before the first meeting this fall the department chairman asked R.C. if he'd like to talk briefly about our Science for the People group at the first or second meeting. R.C. asked if he could wait a couple of weeks in order to prepare, which was OK. The first meeting focused almost entirely on a discussion by the chairman of the employment crisis for PhD's particularly in the drug industry—where "research is being cut back because pressure from consumer groups and the FDA has made the reaping of profits from the marketing of the products of our research less sure." The suggestion was that medicinal chemists had no choice but to accept this situation ("Who are we to tell the drug people how to run their businesses?") and to start "selling themselves" better to the drug companies—by studying harder, by diversifying into more than one area of speciality, by jumping on those research areas the drug firms label as "hot", in short, by burying their faces deeper into the routine, by competing ruthlessly with each other for the positions available, and by begging the drug companies to have mercy on them.

R.C. of course decided he wanted to talk to his department about the industry they were supposed to be so hot on selling themselves to. So he spent a lot of time the next couple of weeks digging into government reports and other sources on the drug industry. The day before the third meeting he went to the chairman to ask that he be allowed to talk at the start of the meeting. He was told he'd have to go see Dr. X, who was coordinating the meetings. Dr. X said he'd have to OK it with Dr. Y who's *the professor* in the department. So R.C. was off to *the professor's* office, where he laid out the whole story and was told, "No, it is not appropriate to present one-sided political views at a meeting with required attendance." R.C. countered: "But I'm not really going to get into politics. I merely want to pick up on some of the things the chairman said in the first meeting about the drug industry and continue our discussion." He was told to go to the chairman and tell him *the professor* didn't think it was appropriate, and to see what he said. So back to the chairman. *The professor* walked in right after R.C. and *"the reason"* came out. It seems that the department meetings are part of a program that is funded by N.I.H. and that several years ago the University of Wisconsin medicinal chemistry department had a similar program. The chairman at Wisconsin allowed some students to "complain about the way things are" at one of the meetings. N.I.H. found out and cut off funds. The chairman is now out in the northern part of Siberia never to be heard from again. So Kansas University can't do a similar thing or "the next thing you know, there'll be F.B.I. agents at our meetings."

Finally, *the professor* suggested that R.C. could call a special department meeting with voluntary attendance for the next day, at which time he could present his views. So he did. (These are the kinds of hassles you run into when you just want to do a simple thing like talk with your colleagues about an issue that should be of obvious concern to them. It would be interesting to hear if other people have had similar experiences, and what way you've found to deal with them. Also, if anyone knows the details of the Wisconsin-N.I.H. episode, we'd like to hear them.)

About 20 people came to the talk, and although the discussion that ensued at that time was not too great, it appears that the fact that a graduate student raised some of the questions that R.C. talked about has stimulated some thought and discussion among the graduate students since that time. R.C. started off by explaining the hassles he had to go through to give the talk. There was little discussion of this—it seemed to be accepted as "the way things are." He then said that he felt the reason most students had chosen to go into the field of medicinal chemistry was that they saw it as a way to contribute to the betterment of human health. He questioned whether this was also a concern of the drug industry, whether it was even a secondary concern or by-product of other concerns. In discussing the industry, he concentrated on its emphasis on sales and promotion (five times more money than is spent on research) and the negative effects this has on the physician's ability to use drugs effectively in combatting disease. In relation to this he went into some detail concerning the detrimental effects of the pushing of brand name drugs as opposed to generic drugs. He also touched on the problem of research going into unnecessary "me too" drugs as opposed to effort being put into solving real health problems.

The discussion afterward was dominated by *the professor* which is what kept it from going anywhere. He and another professor spent a lot of time "rebutting" various "fine points" of R.C.'s data, suggesting his information wasn't up to date, or there were certain logical inconsistencies, or suggesting that he just didn't know enough drug chemistry yet to be challenging these areas. It was the kind of intellectual bullshitting that academicians seem so fond of, and is something that is often hard to deal with. All I know to say is "Cut the bullshit and let's get down to it," but it's a bit tricky knowing when is the right time and manner to do that. We don't want to force people into rejecting what we're saying or doing out of ego preservation. Rather, we want to make *breakthroughs.* One point that was raised concerns certain drugs for which biological availability may depend on the crystalline structure achieved in a particular tabletting process:

In this case, the particular "brand" may make a difference. If anyone can turn us on to information concerning this question, we would appreciate it.

Several people also raised good questions in the discussion that pointed out the difficulties in trying to make reform changes within the structure of capitalism. R.C. had purposely not called into question the entire system of capitalism as it functions in the drug industry, because of his feelings that most people (at least around here) have been "programmed" to "turn off" when they hear trigger words like capitalism, socialism, revolution, liberation, etc. I think what he feels has validity (particularly here in the Midwest where the atmosphere is pretty conservative politically), and that the situation arises primarily out of propaganda efforts of the ruling class, but also out of the tendency the American Left has had to be rhetorical. It's much easier to say "Down with capitalism! Up with socialism!" than it is to work out the details of *why* and *how* in particular situations and in ways that relate to people's everyday lives. On the other hand, not go to the root of the problems and call into question the whole system of capitalism, racism, and sexual repression is inadequate, and this is what some of the medicinal chemical people picked up on. I tend to agree with Herb Fox's comments on this question, although I would like to see further discussion of it. I was at R.C.'s talk that day, so I tried to carry the discussion a step further to the question of the capitalistic system. The general response was (and has been with other scientific people I've talked with) that yes, capitalism didn't seem to work very well, but as far as they could see, it worked better than anything else that's developed so far.

People are beginning to question capitalism. But people are also very suspicious of socialism—and anything "radical" for that matter—they are usually *much more* critical of radical plans than they are of the way things are. Unreasonably so! There is basis for their questions of what will replace the present system, though. The problem of how to extricate ourselves from the present mess and build a new society out of a society as complex and technical as ours is extremely difficult! Again, the Left has tended to throw out the idea of Revolution! Ray! without doing the hard work necessary to develop the details. Highly-educated people who have some sense of just how difficult this task will be (and who are fairly well off economically, under modern capitalism—thanks to imperialism) seem to have a natural tendency to feel like it's less strain to try to adapt individually to the way things are than it is to engage in the highly risky business of revolution (you think the drug business is risky!??!). Andre Gorz has some good things to say about this in *Strategy for Labor.* He discusses the "technoclass"—technical workers whose job is to make the system run as efficiently as possible but never to question the system. He points out that the radical movement needs these people with their skills to help work out the details of revolutionary construction. But the movement will have to work out some of the overall outlines of revolutionary society *now*—both because all people should have a say in this and as a tactic for showing the "technoclass" that there is indeed a better system for them to work on, and under much more fulfilling work conditions.

Anyway, there has been more discussion of political and social issues in the medicinal chemistry department since R.C.'s talk. One of the other exciting developments that has come, to some extent, out of the kinds of individual consciousness-raising we've tried to do is that several people, primarily women, with radical politics have decided to get into health-related work, or have gone back to school to gain other technical skills (film-making, law, for example) that can be put to good use in the movement. This seems to be part of a nation-wide trend in which many people who dropped out of school as they became aware of their alienation and turned to radical politics are now resunimg (with new perspectives) their training. Hopefully this new consciousness will maintain itself and will lead in time to new radicalization and a new mass movement from within this educated sector of the working class. On the other hand, there are reasons to be concerned about these developments. The mass student movement of the late 'sixties has definitely slowed down, and this has affected our ability to do certain kinds of mass political work. Many people have become disillusioned with Left politics, for many reasons. Some have more or less given up hope of radical social changes. Some have turned to other things—particularly religion and Eastern mysticism. This latter trend offers a unique challenge to radical scientists—who probably feel, as I do, that the scientific approach is in general more progressive than the mystical approach, but who also feel that science as it is presently practiced needs to incorporate more in the way of intuitive, aesthetic, or mystical insight and needs to be done with more feeling, or spirituality. One thing we've done is to get several of the people who are just getting into health work into our SESPA activities. Other radical science groups should attempt to get people who are just entering scientific fields into organized activity at the start. Has this happened elsewhere? What has been happening elsewhere concerning this dying down of the mass movement? How has it affected your work?

The primary problem we have faced in building a radical science movement in and around Kansas University is lack of time for political work. It is this problem and how to deal with it, *more than anything else,* that we would like to hear responses about. Towards the end of the summer, we began to consider how to expand our group and to want to do some kind of action project together. But the pressures we were under (the obvious family and personal psychic pressures, but expecially the pressures from work and school) kept us from being able to move. In fact, we had to even give up our regular weekly meetings because of lack of time. There was a great deal of frustration as a result. In fact, at one of our meetings R.C. and I nearly had a fist fight coming out of our efforts to push ourselves and each other. (Although it was scary at the time, this highly emotional confrontation has been really good for our relationship—helping us both to break out of the impersonal, unemo-

helping us both to break out of the impersonal, unemotional patterns we and other scientific people are forced into.)

The scientific system in America (at least, in the academic part of it we are in) almost seems to be consciously constructed so as to inhibit the possiblity of political activity—or any other activity of a "purely human" nature. Course work, studying for cumulative exams, preparing seminar presentations, and demands for research productivity leave the graduate student with hardly any time, energy, or desire for other activities except those that are strictly emotional releases. And the undergraduate student who has to work besides doing school work is in the same fix. The demands and pressures are really incredible, particularly during this period of crisis in the employment of scientists. We tried to challenge our level of political commitment to push ourselves farther, but there is only so much a person can do and still survive in the system—a necessity for most of us at this time. We found ourselves unable to organize because of lack of time on our own part and on the part of those we wished to organize. Can other people please discuss this problem with us? It has been our main problem. Have other groups experienced it—is the problem peculiar to academia or is it the same in industry? What kinds of changes can we make in ourselves, or what kinds of structural changes can we work for to solve this problem? We really need some feedback.

All is not lost however! We haven't been completely devoured by the all-consuming curriculum! Some very exciting developments are happening. I'm enclosing a letter and resource materials list we sent to about 40 of the more liberal science faculty. We've already had some positive response. One thing we have come to concerning the best use of our limited time is that as long as we're at the university our primary energies should be focused on changing science education. We of course also want to focus on research work at the university and on community science projects, but for the present, we are placing these in a secondary position. Radical changes in science education could have profound impact on the long-run directions we'd like to see develop. Since this is where we are, this is what we're focusing on. We hope to build a movement within the various departments to institute courses on the social aspects of science as a *regular* part of the curriculum.

To get started on this, to draw ourselves together around a concrete project, and as a way to reach people, we decided to do a course, The Social Uses and Misuses of Science. Four of us (a professor in biology, a graduate student in medicinal chemistry, an undergraduate in chemistry, and myself) began planning the course several weeks ago. We obtained approval from the College of Liberal Arts and Sciences to offer it as an undergraduate LAS 48 course—a program at Kansas University for offering exprimental courses that are outside a particular department. We came up with the following overall plan for the course: it will center around the discussion of a few Specific "problem areas" in science—both misuses of science and problems where science could be used to help things but isn't. We are preparing introductory discussions of several problems that are important to us, as well as beginning bibliographies, for presentation in the first part of the course. People in the class can of course introduce other problem areas we haven't thought of. After the introductory discussion, everyone will choose particular areas to research in detail (why there is a problem, what is the nature of it in detail, how could it possibly be solved) to lead further class discussion later on. In the meantime, we plan to spend three or four weeks in general discussions on the historical development of science in human society and on an introductory analysis of the overall structure of science in present American society. I've found a really good book on the history of science: J.D. Bernal, *Science in History,* which I plan to write a review of in about a month for publication in the magazine. If anyone knows of other *good* books on the history of science, please let me know immediately. We'll then discuss the problem areas in detail, and finally, the last third or so of the course will focus on *what this means to us* as future scientific workers—personal aspects, work conditions in science, what can we do to effect change, etc. I really hope this last part can "get down to it," and that the seeds of one or several organizations will be planted in the people.

We wrote and distributed a leaflet about the course in all the science departments and talked with people we knew about the course. There are now eight people working to prepare the course, and I just found out yesterday that over 30 people have enrolled in the course! Several faculty members have responded to our leaflet as well and plan to participate in at least some of the discussions. The specific problem areas we're preparing are for example: Industrial Pollution, Transportation, Population, The Use of Science in Vietnam, Technology of Domestic Repression, Psychology and Children, Psychology and Sexual Repression, Drugs in the Counter-Culture, Medicinal Drugs, Food Additives and Processing, World Hunger, Social Sciences and Racism, Industrial Health and Safety, Availability of Medical Care, Preventive Community Health and Mental Health. We want to be able to study these problems in a non-superficial way in both their scientific and social aspects, so we may cut down on the number of areas in order to devote fuller attention to a few key ones. We would really like to hear suggestions anyone might have concerning the course.

So that is where we're at now. The course starts next week. We could write more on it later if you'd like. There are also several people here who are working with free schools who might consider writing about how they teach science with these young children.

I have one other question. One of our people is graduating this spring with a B.S. in chemistry. I am graduating this spring with a B.A. in chemistry & math,. and with 3 years work and academic experience in computer programming. Neither of us plans to go to grad. school now. I hope to get a job—probably in industry

(hopefully in the Kansas City area)—as a chemist or programmer or both. We both want to work in science in ways that we could be most effective in bringing about change. Does anyone have suggestions?

We would like to see other people write similar letters detailing their experiences like I've tried to do here.

Love and struggle,
Steve
for Lawrence SESPA

P.S. You can do what you want with this letter—including rewrite parts of it if you want to for publication as I wrote it rather quickly and sloppily; I would like for at least those parts that raise questions for discussion to get around to other SESPA groups in some way. Let me hear from you . . .

It may be written "rather quickly and sloppily" but it is a beautiful letter. That is why the editorial collective decided to print it essentially unaltered. We should all take up Steve's request to send in letters detailing our organizing experiences. Also his several questions deserve thoughtful answers. The magazine belongs to all of us. Let's use it as Steve has.

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WOMEN AND THEIR BODIES

We are now selling *Our Bodies Our Selves*, a course by and for women, for 30 cents. We were able to reduce the price because so many people like the book that we can do larger printings. (The next issue should be 25 cents.)

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DRUG TESTING

While new FDA regulations concerning drug investigation in humans have gone into effect, the Council of Health Organizations remains concerned about the rights of experimental subjects, especially in institutions of captive populations, such as prisons, orphanages, and hospitals. It asks that questionable practices be called to the attention of the Council, care of Dr. Paul Lowinger, at 2170 Iroquois, Detroit, Michigan 48214

MORE LETTERS

Dear Friends

I just read your great food article in the *L.A. Free Press*, and I am wondering if it's possible to subscribe to your magazine. It sounds really great. Say hello to everyone for me. Bye.

Alistair Gillard
Albert Park, Australia

Dear SESPA,

I'm listening to the tape of the Bundy confrontation at AAAS over WBAT. You're beautiful. Wish I had been there.

All power,
Andrew Draxler
Atlantic Highlands, N.J.

Dear Friends,

I have seen an issue of your publication, and consider myself a member. My occupation is Deep South correspondent for the Southern Patriot, newspaper published by the Southern Conference Educational Fund (SCEF). That means that I am completely impoverished on my movement subsistence income. Therefore, I would like to request *free* back copies of everything you have, which will go into the Freedom Information Service Library here when I'm done with it.

I'd also like to beg for the following stuff free: a sub to *Science for the People*, and a Science for the People button, and five copies of the current issue so I can find out if any of the science people at Tougaloo, Millsaps, or Jackson State colleges are interested.

If you already have any contacts in Tougaloo or Jackson, please put them in contact with me.

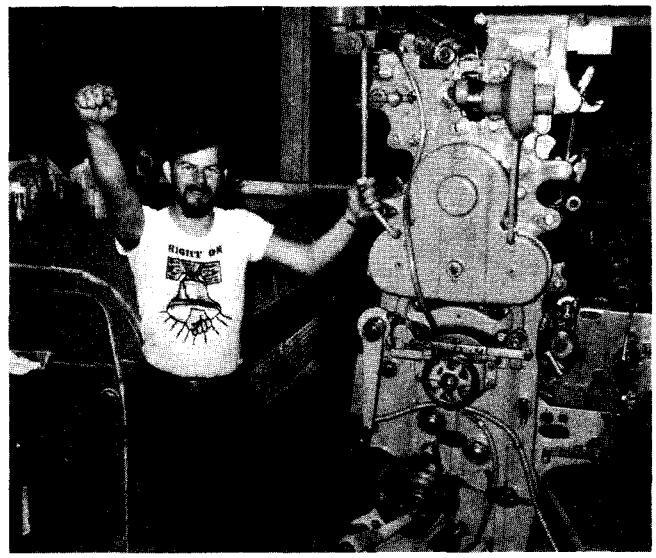
Thanks much,
Ken Lawrence
Tougaloo, Mississippi

P.S. I worked for many years as a chemist and quality control technician in the motion picture industry. I'm a dropout—both from high school and from college, but my training such as it was was mostly biological. My most recent "scholarly" work is a pamphlet *Thirty Years of Selective Service Racism* published by National Black Draft Counselors in Chicago. If y'all would like a copy, I'll be glad to send one.

SCIENCE TEACHING

Do you have ideas to share about teaching science from a radical perspective? We in Science for the People are trying to bring together articles which analyze current methods and materials which propose new directions and which discuss current experiments in science teaching. Hopefully these articles will cover not only all levels of education in traditional institutions, but also learning which takes place outside of them. Our aim is to provide people with information and ideas which will be helpful in undermining the present ideological political basis of science education.

Articles will be published as we receive them and if we have enought material a whole issue of *Science for the People* magazine will deal with this subject.



This unique T-shirt is in a private collection. However fist-in-bell posters 29X32 from the Philadelphia AAAS convention (see page 7) are available at $2 each from Alphabet, 9 Walden St., Jamaica Plain, Mass. 02130.

SCIENCE FOR THE PEOPLE BUTTONS ARE AVAILABLE AT 50 CENTS EACH AND AT REDUCED RATES FOR BULK ORDERS.

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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