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from STUDENT MINORITY REPORT ON THE STANFORD RESEARCH INSTITUTE*

Ann C. Bauer and Harry M. Cleaver

Introduction

Prefacing a report on AID and the University, Stanford trustee John Gardner remarked: "There isn't one American in a hundred, perhaps a thousand, who has a clear grasp of the unique partnership that is evolving between public and private instrumentalities in this country." SRI, along with a handful of not-for-profit research institutes elsewhere, is best viewed as a new component in this evolving partnership and a key coordinator of the joint efforts of competing corporations, of corporations with government, of government and industry with the university.

On October 10, 1968, two days after SDS formally demanded that "Stanford Get Out of Southeast Asia," Acting President Robert Glaser announced the formation of a twelve-member committee to report on present and possible future relationships between Stanford and SRI. For over six months the authors of this dissenting report tried to work within the framework of that committee. Although we recognized that the formation of the committee was just putting off the inevitable confrontation, we had hoped that the committee could help place new information before the community in the course of its deliberations and that its report could clarify some of the important issues.

We had hoped that the committee could help illuminate the core of the Stanford-SRI relationship—the personal influences of the David Packards and Ernest Arbuckles; the market power of big business, big government, and the big foundations; the ideological impact of elite values and top-down methodologies widely shared in both institutions.

But we soon discovered a fixation of the majority of the committee members on legal and formal SRI-University connections. They preferred to dwell on the technical aspects of alternative future actions. Unwilling to cause radical division within the committee, which we feared would impede its data gathering function, we found ourselves avoiding frequent conflict when expressions of our own concerns met with no sympathetic response in the committee.

Inexorably the drive of the committee became one towards consensus on "feasible alternatives" and rigorously detailing them. Having expected the division of community opinion between divestment of SRI and closer ties, we thought ourselves ready to deal with this. But we slowly were taken in by the endless hours of haggling over fine details of imaginary formulations, until our objections to the overall direction of the committee were lost in a forest of words. We, too, began to think that some "neutral," "objective" view of the alternatives could issue from the interplay in the committee.

To this end we thought we could amend our interpretation of the situation and therein draw our own conclusions as a minority statement. Indeed, only a week before termination of the report we had an eighteen-page draft of such a statement.

It was then that we began to understand dimly what had happened. For three days we struggled with the contradiction between our draft and the "objective" and "neutral" cost-benefit approach to which we were appending it. In this struggle we came to recognize the impact such an approach had upon the ideas and facts we emphasized. The very functioning of the committee had insured that the most vital issues be excluded. The cost-benefit approach was couched in a set of premises which assume away any basic conflict of interest between students and faculty and their business men trustees. Once we recognized this we were forced to disassociate from that which we had helped construct. We were faced with the necessity of expanding our draft sufficiently to create a new report which would speak to the issues we feel to be critical—one which would do so within the context of the very real political struggle swirling around us.

We had to do this in a very short time period. We regret the unpolished form of this report. We take responsibility for any of our research inaccuracies or factual errors. However, we hope that our efforts will be of use to the Stanford community in coming to grips with its present problems.

Part I. From little acorns

SRI's origins, in retrospect, seem quite modest. The West Coast economy emerged from World War II greatly strengthened, but with today's aerospace and electronics riches still only a gleam in the eye of a few visionaries like Stanford's Frederick Terman. By and large the economy rested on the pre-war chemical, petroleum, and food industries. In a post-war world where knowledge would become power in new and profitable ways, Western universities had fallen well behind Harvard, Johns Hopkins, MIT, and the other Eastern schools then swimming in the spill-over from wartime research. Terman found Stanford "an under-privileged institution" largely left out of "the exciting engineering and scientific activity associated with the war." The pioneer not-for-profit research institutes—Mellon, Batelle, Armour—or even profit-making researchers like Boston's Arthur D. Little Company had no counterparts in the West. At the same time, regional leaders in the Midwest, South, and Southwest were busily laying plans for institutes of their own.

But Western businessmen and educators were quite responsive to the region's research gap. In fact present antagonists of SRI can lodge paternity suits against at least three different groups. The first centered around three Stanford men—Robert E. Swain, professor of chemistry and for a time acting president of Stanford; Stanford chemist Philip A. Leighton, decorated at the end of WW II for his part at Stanford in the creation of firebombs and later a researcher in the meteorological aspects of Chemical-Biological Warfare (CBW); and alumnus Dudley Swim, later board chairman of National Airlines. Self-christened "The Three Musketeers," the group had discussed the idea of a Stanford-based research institute as early as 1939, at an encampment of San Francisco's exclusive Bohemian Club. They revived the idea after the war, gaining the support of University President Donald B. Tresidder.

Also at the close of the war, three members of the wartime staff of Lockheed Aircraft Corporation actually set up a Pacific Research Foundation in Los Angeles. This group eventually joined in the formative talks about SRI, folding up their own shop when the Stanford-based institute became a reality.

But the most important of the founding fathers was Atholl McBean, a prominent San Francisco industrialist and director of Standard Oil of California. With the cooperation of Stanford Vice President Alvin C. Eurich, McBean invited recommendations for a Pacific Coast research center from Clyde Williams, president of Batelle Memorial Institute, and Henry T. Heald, president of the Illinois Institute of Technology and the Armour Research Foundation, and later of the Ford Foundation. Heald presented his recommendations on January 24, 1946, to a gathering of San Francisco business executives. In his short three-page statement, he called for a high quality industrial research institute to serve individual companies, groups of companies in association, and agencies of government—federal, state, and local.

Trustees keep power

All three of the founding groups favored a strong link between industry and education. Heald called for university affiliation, specifically with Stanford. A month later, responding to the enthusiasm generated by the McBean-Heald report and to McBean's pledge of \$100,000, the Stanford Board of Trustees agreed in principle on the creation of the Stanford Research Institute. Then, in December, sitting as the general members of SRI, the Stanford trustees approved a set of by-laws and elected a slate of directors to govern the new institute. They retained for themselves the power to elect directors annually and to dissolve the corporation at their discretion. They also assumed some measure of financial responsibility, which resulted in a \$600,000 loan in 1948 and 1951, offered access to some of the university's library and laboratory resources, provided consultants (53 by 1968) and teaching positions to SRI staff (14 in 1968), and lent the prestige of Stanford, which aided in attracting staff.

In the words of the university public relations office, SRI became a "wholly owned subsidiary of the university."

The real ties of power over SRI, however, were never as neat as the legal niceties. The first SRI Board of Directors, which met for the first time on January 8, 1947, was divided between members of the university board and West Coast leaders who were not Stanford trustees. From the Stanford Board came President Tresidder (Chairman), Vice President Eurich, investment banker Charles Blyth, John E. Cushing of Matson Navigation, and industrialist W. P. Fuller, Jr., father of the present Stanford trustee. The other directors, not Stanford trustees, were McBean, Paul McKee (president of Pacific Power and Light), D. J. Russell (vice president of Southern Pacific), William L. Stewart, Jr. (executive vice president of Union Oil), and James D. Zellerbach (president of Crown-Zellerbach). This combination of industrial interests provided a group even more powerful and somewhat broader than the Stanford Board of Trustees.

These men dedicated SRI chiefly to the industrial development of the Western states. They sought financial support largely from industry rather than government, and they were themselves chief among the initial SRI Associates, corporations and individuals who paid \$15,000 each to help support the new venture.

Of the early SRI industrial research some 74 per cent went to petroleum and natural gas people, 11 per cent to food products firms, and 10 per cent to chemical firms. Among the early associates were Humble, Richfield, Shell, Standard Oil of California, and Union Oil. "The institute plans to do the kind of research that industry itself might do if each company could set up its own comprehensive research organization, supported by the resources of a great university," SRI publicists wrote.

The new Institute also moved in 1949 and 1950 to provide some leadership as well as research capability to West Coast business, joining with the San Francisco Chamber of Commerce, the University of California, and Stanford to organize business conferences on the industrial importance of research.

During the same year that the "Applied Research Center for the West" was building its partnership with industry, it was also serving government (though to a far lesser degree). At its founding SRI postulated "an important obligation to the government of the United States to assist with scientific research needed for the national defense and welfare, and to keep our facilities open for a national emergency." By 1950 SRI had yielded even more of its basic emphasis on industrial research, possibly hoping that defense department dollars for electrical equipment studies and research on "explosion phenomena" might help fill the Institute's \$450,000 deficit. Still, about three-fourths of SRI's \$2 million research budget came from private clients.

Korean War

Then, in mid-1950, the Korean War erupted, and SRI's hot and cold war partnership with the Pentagon began in earnest. Doubling the portion of its government research from 23 per cent in January to 45 per cent in December, the Institute undertook work in advanced engineering design, strategy planning, projects for the Atomic Energy Commission, and studies of government research facilities. On the basis of such work, much of it classified, SRI continued to gain a larger and larger percentage of its revenue from government contracts through 1965.

But in this shift, SRI did more than simply produce for the new military demand. It also helped produce the demand itself.

SRI did this in several ways. Its earliest military studies, for example, helped prepare a climate of opinion favorable to the expansion of armaments and, not incidentally, of the particular armaments firm growing to maturity in the West Coast economy. Studying the time it would take to build the giant fleet of aircraft in 1948, if war should break out, SRI scientists posed two alternatives: mobilization with a year (1949) and mobilization with three years (1951). This multi-disciplinary M-Day approach did in fact aid the eventual mobilization. But its self-fulfilling assumptions, later applied to electronic equipment and aircraft engine production, also heightened the likelihood that mobilization would come.

Other studies over the years of how to maintain U.S. production in full scale air war, development of civil defense and pre-paredness programs, and the like helped shape the cold war climate of the fifties, in which Americans could all too easily think the unthinkable.

SRI executives also sponsored "the world struggle against Communism" and the garrison state partnership in less academic fashion. "Even now," wrote 1950 director Jesse Hobson, "the united research endeavors of industry, govern-ment, private individuals, and research organizations present an imposing bulwark for the safety of this nation." "Research," he urged, "is a sword that is sharpened by use."

At meetings of SRI Associates, speakers such as Donald D. Quarles, the Assistant Secretary of Defense for Research and Development in 1963, urged the associates "to help us create public confidence that we are in fact making wise disposition of our defense resources." And, in enlarging the Board, SRI leaders brought in leading aerospace industrialists like Donald W. Douglas, vice president of Douglas Aircraft in 1949, and in 1951, industrialist John A. McCone, the Deputy Secretary of Defense in 1948, Undersecretary of the Air Force in 1950, and later director of the Atomic Energy Commission and the Central Intelligence Agency. Then setting new policy in 1954, after Korea, the Board moved to strengthen defense orientation.

ABM recoups losses

To be fair, SRI leadership in this process was really overshadowed by the work of the University itself. Where SRI's directions placed its initial faith in private industry, the real architect of the Peninsula defense economy, Stanford's Frederick E. Terman, then dean of engineering, looked much more hopefully to military financing of research-oriented industry.

Consequently, he built up a "steeple of excellence" with key university de-partments, opened university labs to industry, helped spin-off firms like Varian and Granger Associates, and led in the creation of the Stanford Industrial Park in 1951. These efforts, and of course the federal financing, actually made aerospace and electronics the big guns of California industry. During the first eighteen months of the Korean War, for example, California employment in the electronics industry rose 117 per cent.

Faced with an entirely new economy, SRI's course was clear. Merely to maintain its partnership with industry, it would have to integrate the new industrialists, both from the Peninsula and from Southern California, and further tie itself to the Pentagon.

The process of integration was dramatic. In 1955 Terman joined the SRI board as vice chairman of the newly formed executive committee. Then, in 1956 came Arnold Beckman of Beckman Instruments in the Industrial Park, followed by industrialist Edgar Kaiser in 1957, David Packard in 1958. Tom Jones, president of Northrup Aircraft, joined in 1961, along with General William A. Draper and Thomas P. Pike, both of whom had occupied high ad-ministrative positions in the Department of Defense during the Eisenhower administration. The number of new defense industries among SRI Associates was equally impressive.

Under the leadership of these men and corporations, SRI established a Naval Warfare Research Center, a Strategic Studies Center, and a Tactical Operations Program to search for more effective weapons systems and the concepts for their use, along with millions of dollars of research in space and missile science.

But the real clincher is SRI's leadership in an increasingly unpopular field of missile defense. By 1963, research on the ABM had become important to SRI and to associated industries. Facing a downturn in the California defense economy, SRI executive vice president Weldon Gibson spoke publicly about "possible existence of agreements between the United States and the Soviet Union leading toward arms limitation" and "the fact that more and more leaders are supporting the judgment that the arsenal of missiles and warheads has reached a point of diminishing returns."

By 1964, however, at the bottom of the pre-Vietnam economic lull, he saw "indications that short-term losses over the next few years may be recouped later in the decade with new developments in anti-missile missiles or a new generation of strategic weapons."

Vietnam pulled Gibson and the California economy out of that particular crisis, but now that the very escalation in Vietnam has started to hurt economically, especially in those industries dependent on subsidized research, the ABM is once again with us ... and with SRI.

According to the government's 1968 Technical Abstract Bulletin, among SRI reports are the following [identification numbers of the reports are omitted—C. P.]: A Methodology For National Deployment of Local Ballistic Missile Defense Batteries; National Effectiveness Evaluation Methods for BMD. In addition the Institute is studying a series of civil defense projects related to missile defense, as follows: A Methodology for Estimating Fallout Casualties; Light Attack Shelter Requirements and Defense Avoidance Fallout Tactics; Civil Defense Interactions with BMD in a Direct Attack; Computer Implementation of the Miller Fallout Model; Civil Defense Interactions with Ballistic Missile Defense.

Part II. Around the world

Coordination

Though tempting, it would be misleading to focus too heavily on SRI's leadership in the "military-industrial-academic complex." The SRI board was interested in more than simple defense industries, and the Institute itself has appetites far beyond the fluctuating expenditures of the military. Expansionists, rather than merely defenders of what they already have, the SRI people have best expressed their particular genius by providing strategic leadership and technical manpower for the international expansion of West Coast corporations.

SRI's first big foreign push came in 1957, a natural internationalization of the earlier emphasis on regional development through private industry. Weldon Gibson, the man

who has headed SRI's international program since its beginning in 1949, has stated that SRI is dedicated to two objectives:

economic progress, and the strengthening of private business on an international scale. These are good and noble causes and we are proud to stand with international companies the world over in pursuit of the fundamentals involved. Our objective is to do everything within our power to develop the private sector as the basic factor in economic strength and progress. (SRI-International, No. 11-1969, The Lima Report.)

The Institute also had a solid base of experience in piecemeal research and special projects. These experiences were as diverse as development studies on Cuba, Pakistan, India, Peru, Venezuela, Bolivia, Chile, Argentina, and Brazil, the establishment of a technical information service for American firms in Europe and an office in Zurich, liaison with research institutes abroad, and management trips abroad. But the main thrust, naturally enough, was in the Pacific area. In 1949 Secretary of State George C. Marshall and Harold Stassen invited SRI staff-member Eugene Staley to Washington to "help revise the American policy on China" and to study the "problem of halting the advance of Communism in the rest of the Far East." SRI was at the time studying the decline of Oriental commerce along the West Coast, and later undertook a study for Matson Navigation Co. on the feasibility of re-establishing passenger service in the Pacific. (On Matson's board sat Stanford trustee and SRI director Charles R. Blyth, president of Blyth & Co., Inc.) SRI also cooperated with the Asia Foundation, which has been known as a CIA conduit, in an exploration of private investment possibilities and potentials in Pakistan, Ceylon, Burma, Thailand, Indonesia, Japan, and the Philippines.

The landmark in the development of SRI's internationalism and in the supra-national union of private enterprise it represented was the International Industrial Development Conference (IIDC) of 1957. Co-sponsored with Time-Life International, the conference brought 500 "key business executives" from 62 nations together—something of a first in the post-war period. Their common dedication was "to the role of private enterprise in stimulating economic and industrial development in the free world. The major objective of the meeting is to pool the experience of banking and industrial leaders in an examination of problems and proposals effecting industrial development throughout the world." (Research for Industry, Vol. 9, No. 7.) Among others addressing the conference, two names stand out: Henry Luce of Time-Life and Alfried Krupp von Bohlen, proprietor of a well-known German family business.

With the conference, SRI moved even farther from its origins as a department store for corporation research and closer to its present task of reducing international competition. Through inter-business communication and "a dynamic partnership and philosophy among those who guide much of the economic destiny of the free world," a movement toward the reduction of competition among individual firms seems to be at hand. By focusing on "relationships in newly developing areas between government development programs and private enterprise" and "techniques for investor-government collaboration under private management," it sought to reduce the anachronistic competition between private enterprise and public bodies.

Institutionally, the conference led to the formation of SRI's International Industrial Development Center, and a going concern with research problems such as "Private

U.S. Venture Capital for Investment in Newly Developed Countries" and "Brazil: Factors Affecting Foreign Investment." (SRI Annual Report, 1957, SRI Press Release 10/3/58.)

SRI's premise was that corporate investment capital and Third World investment "opportunities" had to be more efficiently brought together and that SRI should do the job.

Since 1957, SRI's role as a coordinator of overseas corporate strategy has grown. In 1966 the international programs that had increased through the years, often under the supervision of Staley or Weldon "Hoot" Gibson, were brought together in a new managerial entity, SRI-International, with Gibson as head. The Institute announced that this reflected "a basic policy decision by the ...Board of Directors and management to expand research operations in the international field."

"Major emphasis will be placed on research projects for business and industry, economic development projects for government and international institutes, and projects involving major programs in the security of the United States," SRI announced. Corporate investment planning, government-sponsored "development" programs in the Third World, and counterinsurgency research thus came solidly under one roof at SRI.

The one area where these activities have been thus merged more efficiently than in any other has been the Pacific. There international cooperation has reached an advanced stage in what American industrialists are calling the "Pacific Basin strategy," something SRI-International's Weldon Gibson denied innocently in a letter to the October 11 [Stanford] Daily: "We have no Pacific Basin strategy," he said, "other than a program of research and public service aimed at accelerating economic and industrial development in all the Pacific nations."

Bank of America president Rudolph Peterson, a member of the SRI-International advisory committee, has been somewhat more candid: "There is no more vast or rich area for resource development or trade growth in the world today," he said in a Chamber of Commerce publication. "Were we California businessmen to play a more dynamic role in helping trade developments in the Pacific Rim, we would have giant, hungry new markets for our products and vast new profit potentials for our firms."

The idea of a Pacific Basin strategy is total rationalization and control by business interests of the overall Pacific economy, using government funds, agencies, and military might when necessary. "Pacific Trade," an SRI pamphlet that prepared the way for the SRI-sponsored Pacific Industrial Conference in April of 1967, outlined an idea for a Pacific Basin Organization for Economic Cooperation, through which the corporations of advanced industrial countries would cooperate rather than compete—seemingly a sort of giant price-fixing, resource-sharing, pie-slicing organization which would decide on "specialization between countries to take advantage of the potentially huge economies of scale in ... production," develop a "systematic exchange of technical information," encourage "frequent consultation among business groups," and "joint assistance and cooperation in the further development of less-industrialized areas of the Pacific basin."

The organization would be "confined at the outset to the more industrialized nations" and would be "primarily under private auspices."

SRI's Pacific Industrial Conference in Sydney, Australia, in April of last year, attended by 125 "senior executives" from 22 nations, was opened with a speech from SRI chairman and Stanford dean of business Ernest Arbuckle, no stranger to Australia, where Utah Construction has extensive iron and coal interests.

Arbuckle said that Stanford professor Eliot Mears' pre-WW II description of the Pacific Basin as "an economic community of the future" articulated a basic view "that remains today in principle and practice within both Stanford Uni-versity and Stanford Research Institute."

Gibson told the businessmen that their meeting was noteworthy because "it is an act of leadership by private enterprise in the interests of free nations throughout the Pacific" and "it is organized entirely under private auspices with an emphasis on the growth of private enterprises." President Johnson sent a telegram hailing "a sense of common economic destiny ...growing among peoples in the Pacific Basin."

The Sydney meeting was the first of a plethora of such gatherings under SRI auspices. It led to the SRI-led August invasion of Indonesia by about 200 "senior executives" who arrived to "acquaint" themselves with "current con-ditions" and stayed to arrange corporate investments. Indonesia "contains extensive natural resources," SRI explained. The meeting "created a new and highly effective relationship between business and the government in Indo-nesia," Gibson said later. (Manila Agenda, p. 2.)

The Djakarta meeting in turn led to an SRI-Singapore Meeting last summer at which 170 "leaders of private enterprise" were moved to "strongly endorse the concept of regional economic development in Southeast Asia."

Southeast Asia, in fact, has been the focus of much of SRI-International's recent attention. The SRI-Singapore meeting was followed by an SRI-Manila meeting "devoted to Business in Southeast Asia," in March of this year. Open-ing the meeting, Gibson explained: "This part of the globe will surely be at the center of world attention during the next decade or more," he said. "This will be especially so in the economic field once military strife in the region is abated." Unfazed by the agitation among students at Stanford, Gibson eulo-gized "private business" as "the greatest social invention of modern times" and pledged SRI's "continuing assistance" to the development of "private enterprise" in Southeast Asia, particularly Indonesia, Malaysia, the Philippines, Singapore, and Thailand.

Other SRI-International business conferences have included the North At-lantic Industrial Conference (October, 1967, in Seville, Spain), last November's Conference on East-West Trade (Vienna), and this January's SRI-Lima Meeting in Peru, a country in which the entire Stanford complex is deeply involved. After the Peruvian meeting, Gibson wrote that all of the meetings in the series —Sydney, Djakarta, Singapore, Seville, Vienna, and Lima— "were dedicated to the advancement of economic development and to the growth of private enter-prise—especially international business."

COIN

For the underdeveloped nations, the bite in the SRI-style coordination and control of investment flows is the direct tie-in with counterinsurgency efforts. Coordination of investments which benefit many of the Stanford and SRI associated corporations creates a natural interest in the economic and social "stability"—the maintenance of a proper "investment climate."

In 1957, Henry Robison, SRI senior economist, began his speech to a Stanford Alumni Association Conference on "America's Stake in World Economic Stability" with: "since World War II, the United States has been thrust upon the world's stage in a position of power and influence probably undreamed of even by those statesmen of a past generation who were imbued with a spirit of manifest destiny." Discussing "the economic factors which underlie the political relationships" between America and the Third World, he asserted that the countries of Southeast Asia "are more important for their geographic position than for their economic potential." Robison argued that "at last freed of the Western political domination of the past century," it is essential for the Third World "that their progress be made under Western guidance and Western concepts of individual freedom rather than under the heavy hand of Communist slavery." He concluded that "The free world must not lose Southeast Asia ... as it has already lost China."

The fear of "losing" Southeast Asia is presumably just the reason that SRI did a study that same year titled "Environmental Conditions in Selected Areas of Potential Limited Warfare," which was prepared for McDonnell Aircraft Corporation and which described in detail the application of "limited" warfare techniques to certain peripheral areas of Asia, including Vietnam.

By 1961 SRI senior economist Eugene Staley was in Vietnam performing what has become a second job for SRI "developmentalists"—advising the U.S. government of methods for bringing "stability" to its subordinate dictatorships. Staley headed President John Kennedy's special financial group to the Diem government-in-trouble in Vietnam. The group's purpose was to develop a plan of "coordinated financial action which would be in support of counter guerrilla activities." His recommendations to JFK were for an increase in aid for military measures and for "economic and social development," including "resettlement" where it was necessary to "remove the population from Viet Cong pressures." The program was expected to "restore security within 18 months." It didn't.

In 1966, SRI took a second stab at this special kind of social reform, this time sending senior economist William Bredo to the Saigon government on the formulation and implementation of a program of land tenure reform. "In view of the critical situation in South Vietnam," began the unsolicited SRI project proposal to AID, "the proposal emphasis is on political objectives rather than economic goals."

"It is considered most important at this time to stress a program of land tenure reform which emphasizes social justice, which produces a more favorable rearrangement of

the rural power structure, and which will tend to produce political results that will contribute to winning the war," the proposal said.

Maintaining a proper investment climate, land reform, financial counseling—none of these programs sound anything like as sinister as "counterinsurgency." But this subtlety is in the very nature of COIN [counterinsurgency] activities, especially as developed under the Kennedy government, and it's the reason so many COIN programs pass for charity. For, according to the Dictionary of United States Military Terms for Joint Usage, issued February 1, 1964, by the Joint Chiefs of Staff, counterinsurgency is "those military, paramilitary, political, economic, psychological, and civic actions taken by a government to defeat the subversive insurgency."

Faced with so coordinated and global a strategy, the question of encouraging or prohibiting counterinsurgency depends less on the niceties of particular programs than on one's attitude toward outside intervention or on a choice between a given regime and its "subversive insurgents." At the very least, intelligent men should come to expect that military intervention of one kind or another will often follow on the heels of SRI-style economic expansion.

As proof we need merely list those explicitly labeled counterinsurgency contracts which SRI coordinates with its programs of "economic development." After all, approximately a third of SRI's international project revenue last year was spent for South and Southeast Asian projects, mostly paid for by the Pentagon. [There follows a list of thirteen reports with such titles as "Investigation of Counterinsurgency Surveillance Processes" and "Operational Testing of Wireless Seismic Ambush Aids."—C. P.]

Part III. SRI's goodies

Even SRI's enemies are quick to point out what appear to be its obviously constructive activities in the physical and social sciences. But, as with other SRI activities, they are not always what they seem.

No one needs be told air pollution is of serious concern in California, particularly in the Bay Area, which is cursed with the third most critical air pollution problem in the U.S. SRI began research on air pollution almost immediately after its inception, but SRI's smog research differs from its defense work only in degree: instead of conducting research aimed at protecting people from air pollution, SRI gathers information which helps polluting industries escape public condemnation and more stringent regulations.

In 1949 and 1952, SRI joined the California Institute of Technology, UCLA, and USC in sponsoring two symposiums on air pollution at which scientists, industrial representatives, and government leaders were treated to lectures dealing with smog analysis and detection methods. But SRI smog research at the time was primarily funded by business organizations from industries among the prime polluters, such as the Western Oil and Gas Association.

The November, 1948, issue of SRI's news bulletin, *Research for Industry*, cites a survey of people in Los Angeles, the greater number of whom attributed smog to industry. But

an investigation at that time under the direction of SRI's supervisor of air pollution research dealt only with the impact of the Los Angeles climate on smog.

More recently, when pollution from the Pacific Gas and Electric (PG&E) plant at Moss Landing aroused a furor among citizens in Monterey County, PG&E brought in the head of SRI's Environmental Research Department, Elmer Robinson, as one expert witness. PG&E's president, Shermer Sibley, sits on the board of SRI, as do four other past or present directors of PG&E or its subsidiaries. Robinson is a member and past chairman of the Bay Area Air Pollution Control District (BAAPCD) advisory council, an agency which, by failing to enforce existing pollution regulations, often seems to be working more for the pollutor than the consumer. Much of Robinson's research at SRI is sponsored directly by the very industries the BAAPCD is expected to control.

Robinson's testimony concerning PG&E's Moss Landing plant exonerated the company and contradicted that of biologists from Stanford's Hopkins Marine Station in Pacific Grove and scientists from UC Santa Cruz and Monterey Peninsula College.

According to Ed Munson, Air Pollution Control Officer for Monterey County, the PG&E plant dumps more nitrogen dioxide into the air than all the power plants in Los Angeles county. He says PG&E is responsible for 90 per cent of the nitrogen dioxide pollution in the Monterey region, which harms crops and causes emphysema.

Smog and gas

A research project Robinson carried out with Robert Robbins is reported in the December, 1968, issue of the SRI Journal. Sponsored by the American Petroleum Institute, it exonerates industrial polluters by emphasizing natural sources of pollution, such as swamp gas, decaying organic matter, and vegetation. Robinson overlooks the hydrocarbons and sulfur dioxide which are chief factors in air pollution and products of oil refineries.

At both the University and SRI, those who do smog research are often the same men who work on Chemical and Biological Warfare (CBW). Robinson worked with SRI's CBW-men, William C. Thuman and Richard D. Cadle, on building an important piece of equipment for their work, the SRI aerosol camera. In a 1954 article in the Biological Photography Association Journal, he described its importance: "The armed forces may use aerosols defensively as in smoke screens or offensively in chemical or biological warfare."

SRI's social science contributions are also often thought to be beneficial. These began with a 1952 conference bringing the SRI Associates together to discuss application of social science to industrial problems. Dean Ernest C. Arbuckle of the Stanford Graduate School of Business explained that "in the near future, it is possible that private business

may take over from government the task of guarding the humane aspects of our industrial civilization."

What this turns out to be is guarding the boss from his employees. SRI publications document frequent calls for psychological research on worker morale, methods of screening job applicants, of increasing worker efficiency, perfecting on the job training, and the like. Social science at SRI does not generally provide models for effective labor organizing, police control boards, or self-determination by students.

In fact, SRI's education research frequently appears to channel, rather than free, students. Dr. Howard Vollmer of the SRI research staff wrote in the [Stanford] Daily last fall that "the shift to social problems has taken place in the Institute in matters like educational, urban, and minority problems"—problems, by the way, which industry and government-funded researchers are most likely to see as counterinsurgency affairs. "Funds from the Defense Department," Vollmer said, "are concentrated around behavioral and social areas and primarily concerned with improving efficiency and job satisfaction."

BART men

SRI development of designs for urban mass transit, too, seems more likely to serve the interests of the industrialists on the board than the people on trolleys. SRI did some of the feasibility surveys which preceded the creation of the Bay Area Rapid Transit system (BART). The push for BART began in the early fifties when a group of SF businessmen connected to the Blyth-Zellerbach Committee initiated the studies. The committee, a corporate group supporting urban renewal, was formed by Charles Blyth and J. D. Zellerbach, both founding directors of SRI. Blyth was also a Stanford trustee.

As a part of the development of a downtown San Francisco business center, BART was to enable suburbanites to commute to work; but besides providing inadequate service to city dwellers (it avoids Hunters Point and bypasses the Oakland ghettos), BART financing will be a burden to those least able to pay by increasing the tax burden and by raising property values along the route.

These studies, and others regarding plans for school desegregation, protection of business investments in the city, "reverse commuter" facilities, and the development of Oakland, raise much the same questions as other SRI research: do we approach the problems from the standpoint of business or from that of those the research ultimately affects?

What we mean by constructive research is not research framed by one self-seeking interest group, which happens to have the money to fund it. The inference can be drawn that all too frequently the SRI researcher, under pressure to sell a product, has approached a problem uncritically and unable to separate himself from the view of his contractor. Unfortunately this is characteristic of most SRI activities. The quality of work at the Institute, particularly in the social sciences, declines as it aims at preserving the status quo rather than meeting people's needs.

We have discussed some research touching upon the critical problems of cities but which has not been chosen by the people of those cities. Such work is at the least irrelevant and at the most detrimental to the needs of people. Guiding Institute research policy both to encourage self-sponsored research rather than work responding to a fluctuating market and to increase the "relevance" of such work to all people is important in redirecting policy of the future Institute.

While redirecting policy is more difficult than restricting research, we must take steps in that direction. Obviously those people affected should be asked about the needs. To ensure that SRI meet the changing social needs, we must institute continuous review and reinterpretation of policy. Only this way can we guarantee the future "benefits" of research, and a critical approach to solutions.

Editor: The rest of the student minority report suggests guidelines and mechanisms for ensuring control of SRI by the university community and some means whereby those affected by its research can have some voice in what research is carried out. The report suggests that in view of widespread community protests, all research related to the war in Southeast Asia be stopped, as well as all research dealing with chemical, biological, and radiological warfare. The authors do not argue that all military research should be forbidden, but they explicitly "reject the contention that any research the U.S. government desires to fund is acceptable, and that questions of mortality and political responsibility must be directed toward the government policy guiding the uses to which the research will be put." [1] 8

Editor: UNIVERSITY NEUTRALITY

For many liberals, the recommendations of Bauer and Cleaver mean the politicization of the university, and that, in turn, means the end of academic freedom. Only if the university stays clear of politics and maintains its distance from the various communities that seek to influence it can independent, value-free scholarship be guaranteed. When the New Left cast politics into the university process, it meant that the Governor Reagans, the right-wing groups, the state legislators, and local municipal agencies could rush in too. The result, according to the middle-class liberals, has been disastrous attacks on the university and the conversion of the university into a wayward instrument of varying political pressures.

For the New Left, the answer is simple: the university has always been political; it has just not been exposed as such. The university's role became clear when faculty members and students were penalized for open dissent from government policies and when research on the role of the university in national affairs was disseminated.

In the process of disseminating this research, through confrontations and other means, some people were hurt. One minor but revealing incident was reported in a story in Look magazine. At a meeting regarding SRI, a young physicist heard the president of SRI argue that no researcher was forced to undertake any project he found morally objectionable. The physicist contradicted him, saying that he had been pressured into doing chemical-warfare research. The physicist was fired. As the executive vice president of SRI put it, according to the magazine article, "People like that have a

decision to make—do they want to support the organization or not?"[2] This would be the price of "neutrality."

It would be hard, in any case, to believe that the top thirty or so uni-versities, with two-thirds of their regents and trustees drawn from the com-mercial, industrial, and financial empires of the country, could be neutral about the issues the Left was raising. One answer to the Left's charge might be to admit that the universities are not neutral in the sense that they seek to turn out the engineers, scientists, and teachers needed to man the system and inculcate the ideals of capitalism and democracy into the young. Society needs these personnel. At the same time, however, the universities foster the humanities and the social sciences, and the members of these disciplines are overwhelmingly more liberal in their politics than the trus-tees, more critical of the business system and the values it imposes, and obviously free to dissent from the prevailing ethos. These disciplines have always been centers of dissent. Thus the corporate state does not and cannot control the university in this respect. Furthermore, the trustees are intelligent men and they see the need for some degree of academic freedom and criticism; otherwise they would have begun long ago to choose which textbooks to use, which professors to hire, and what the goals of research should be. A book such as this one could not be put together if the uni-versities had not produced the research that the New Left feeds on, paid the salaries of some contributors, and generated a market among undergraduates that would encourage a publisher to publish the book.

To this defense the New Left, in its less hyperbolic moments, would re-spond as follows. Stringent controls are expensive and difficult, and they are probably not worth the cost and effort. The system, until very recently, has not been seriously attacked by social scientists and humanists, so there was no need to invest much effort in attempts to control their activities. The situation may be changing now, with state legislators demanding to see reading lists in selected social science courses (New York State), cancelling recommended raises for tenured professors who have spoken out against the war (University of Wisconsin), and countless subtle and not-so-subtle political tests in hiring and promotions throughout the country.[3]10

The success of the New Left may in fact put the liberal theory to a strong test, but in any case, one gathers the system is not that perfect. In addition to the costs of control, internal contradictions exist, errors are made, op-portunities are lost, and a remnant of values remains in American society that makes it difficult to stamp out dissent and criticism. Given these aspects, control might be achieved through more subtle means, and the control might be selective, concerned with what the business system needs at any particular point in time. If this is the way the system does in fact operate, the next article will illustrate it. That article, "Sinews of Empire," shows how the social sciences are co-opted.

It also illustrates a more general point. The Stanford Research Institute story is not an isolated example. Universities in general are not simply passive and impartial suppliers of manpower and research for corporations. A simple supply–demand function is operating in one sense: people need jobs; some of these are good jobs, requiring high skills and offering high pay; and some mechanism must be found to train people for

them. But much more is true of universities. They are a kind of active corporation in their own right, seeking out profits for business (and thus growth for themselves), interlocking with business (and government and the military) at higher levels, planning business strategies in the office of the university president or a convenient, nearby foundation, and so on. The universities thus act as power centers for the business system, as well as resource bases.

* Ann C. Bauer and Harry M. Cleaver, "Minority Report," *Campus Report Supplement* (Stanford University Relations Office), No. 5 (April 14, 1969), 37-50, 51-52

[1] *Ibid.*, p. 48

[2] Charles W. Bailey and Frank Wright, "American Militarism: The University Arsenal," *Look*, 33:17 (August 26, 1969), 34.

[3] According to a brief note in an issue of *The Guardian* in the fall of 1970, the precise date of which I cannot locate, a special sociology course entitled "The Critical Spirit" at the University of Oregon had an enrollment of more than two hundred undergraduates. University officials turned the list of students over to the FBI. For a description of repression in the California State college system, see Bruce Severy, "Purge in California Education," *The Guardian*, February 6, 1971, p. 71