

STANFORD, THE TRUSTEES AND SOUTHEAST ASIA

Prepared for the Stanford Community
by members of the Stanford Chapter,
Students for a Democratic Society.

INTRODUCTION

Prior to four years ago, it was not customary for people living in the Stanford-Palo Alto region to question (or research) the kind of products that this region is producing; their social benefits, or their social harm. Electronic aids to warfare in World War Two seemed quite legitimate--the US was fighting Nazi fascism then. War research and weapons made for the Korean War seemed justified by the "threat of communism". It was only with the Vietnam war that very many Americans were goaded into doubting their governments use of public resources. Such as men (soldiers) academic resources (weapons and counter-insurgency) and taxes (subsidies to build defense industry).

During anti-war protests in 1965-1966, people belonging to the Stanford Committee for Peace in Vietnam did extensive research on the role of West Coast Industries in the Vietnam War. They found that the men who direct the major "defense" industries and serve on government advisory boards are the same men who are legally entrusted to run Stanford. They found many professors doing chemical and biological warfare studies, or doing classified research.

The political principle that radicals four years ago expressed has become increasingly accepted by the student and faculty communities of the university. "We are responsible to challenge inhuman practices of our community; the right to life and self-determination of the Vietnamese (or Thai) people is greater than the individual's right to do anything he wishes in the academic community of Stanford. The social institutions of America which cause suffering must be changed, no matter how sacred and innocent they seem to be on the surface."

Though more people understand and sympathize with the radical position now, their actions to date have not been effective enough to stop one war contract, one bomb's production, one new weapon research+development process. The only changes have been liberalization of university course and living regulations, and a certain amount of changed political attitudes among students.

All of which are simply more privileges that we ought to have had as rights in the first place.

None of which bring us any closer to changing the destructive effects Stanford has on the people's of the world outside (and to a less extensive degree inside) Stanford.

The following part of this document is a compilation ^(Some of) of the research done so far on the Military-Industrial-University complex that is perpetuating the destruction which we oppose. It's purpose is to educate people such that their future actions in fighting that destructive complex will be successful. It is not exhaustive, but hopefully sufficient for the present.

BIRTH AND GROWTH OF THE MILITARY-INDUSTRIAL-UNIVERSITY COMPLEX AROUND STANFORD

From the time of America's entry into the Second World War, a market for aerospace and electronics technology and products has come to be ^{one of the} the most expanding sector of the American economy, and the economic sustenance of the Midpeninsula. The rough size of this complex is indicated by the fact that at least 60% of all manufacturing wage and salary workers in Santa Clara County are employed in the aerospace and electronics industries. And in the last two years, thanks to the war, there has been a 40% increase in aerospace industry jobs.

the main elements of the Stanford complex are: the Stanford Research Institute, the Schools of Engineering and Business, and the several-hundred defense-oriented companies located around the edges of the campus, mainly in the Industrial Park.

As local representatives of more national ruling-elite interests, the Trustees, SRI directors, and local corporate executives ultimately direct the operations of the Stanford complex, as Provost Emeritus Frederick E. Terman, long-recognized as the principle co-ordinator of the complex, indicated in 1965: *just show how they control lines of our people not just vietnam*

"We have been pioneers in creating a new type of community-- one that I have called a "community of technical scholars." Such a community is composed of industries utilizing highly sophisticated technologies, together with a strong university that is sensitive to the creative activities of the surrounding industry. This pattern appears to be the wave of the future."

TRUSTEE'S CORPORATIONS AND DEFENSE PRODUCTS

The defence complex is dominated by the aero-space and electronics corporations, which have their offices and plants in the Industrial Park. Lockheed, directed by Charles Ducannon, vies with General Dynamics from year to year as the #1 defense manufacturer. Lockheed's products include the C-5A transport plane. "Able to carry large numbers of troops and most heavy Army equipment, the plane is designed to reduce US dependence on foreign bases". (New York Times) The power to intimidate smaller countries which this plane gives the United States military will be obvious the first time it is used. Originally estimated by Lockheed at 3.1 billion dollars, the costs of this plane are now commonly estimated at over 5 billion dollars. Secretary of Defense Laird and Deputy Secretary Packard (former trustee--see below) defended Lockheed from Senator Proxmire's accusations of cheating on Lockheed's part. (Trustee Edmund Littlefield is a director of General Electric, which is doing the C-5A engines.)

Hewlett-Packard, directed and owned by Trustee William Hewlett (and by arrangement held for former-Trustee David Packard) is the foremost manufacturer and developer of electronic measuring devices, of which over one-third are defense-related. Hewlett-Packard receives subcontracts from General Dynamics, Lockheed, Boeing, etc., the prime-defense contractors. H-P items such as signal generators, vacuum voltmeters, and spectrum analyzers are essential for accurate bombing, decoding enemy communications, and similar military uses. (Sources such as the New York Times and Wall Street Journal have stressed the importance of Packard's managerial and technical expertise in this field of electronics as a prime reason for his move into the managerial role he holds now over the Pentagon. Already he heads task forces on the Anti-Ballistic Missiles controversy, the draft, and others.) Hewlett's statement to the Daily in 1967 that "Hewlett-Packard is not defense-oriented" is a harsh strain on the idea that everyone has his point of view. Over 92 million dollars last year in military work, and not less than \$70 million worth in 1967, is the important statistic. It is probably true that Hewlett-Packard does not depend (and possibly hurts a bit) on the Vietnam War: new weapons systems and projects heavily dependent upon electronics would be funded if the war were ended. The ABM alone could cost up to 70 billion, though presently Packard is recommending a "thin" system costing around 5-10 billion.

MCO Corporation, also directed by Hewlett, manufactures armed personnel carriers and a wide variety of munitions, including anti-personnel fragmentation bombs (guava) widely used in Vietnam, Shrapnel from these bombs creates multiple wounds which tie up scarce doctors. It often kills also. MCO also produces Sarin, a lethal nerve gas. According to an Army technical manual: Sarin produces in order of importance, the

3
following effects: "running nose; tightness of chest; dimness of vision and pinpointing of the eye pupils, difficulty in breathing; drooping and excessive sweating; nausea, vomiting, cramps, and involuntary defecation and urination; twitching, jerking and staggering; severe headache, drowsiness, coma and convulsions...cessation of breathing and death....respiratory lethal doses kill in one to ten minutes, and liquid in the eye kills (instantly)."

General Dynamics, the #1 defense contractor at \$2,239,300,000 (last year) has as its president and Board Chairman Roger Lewis, Eisenhower's Assistant Secretary of the Air Force. David Packard just quit the G-D Board, and sold several million dollars worth of stocks he owned from G-D. General Dynamics makes Polaris submarines and the recently renewed F-111 fighter bomber, center of considerable controversy since it was thought up and subsequently (too frequently) crashed down. It brought charges from Senators of being fraudulently assigned to G-D initially, and the controversy itself is at least two books-worth.

Northrup, represented on the Stanford Board by Trustee Tom Jones, did over \$300,000,000 worth of defense work last year, manufacturing Air Force fighter planes and CS tear gas.

Watkins-Johnson, owned by former professor Dean Watkins, does electronics work for the Pentagon. Over 65% of its revenues are in defense. Watkins is the new Regent at University of California, as well as a Trustee at Stanford.

Union Oil's director Arthur Stewart is a Trustee at Stanford too, though he is less likely to make the UC Board given relations currently between Santa Barbara and Union. Stewart recently told an audience at Lagunita that plans to set up drilling off the coast of Peru have fallen through.

Tenneco's Board Chairman and President Gardiner Symonds is a Stanford Trustee also. Tenneco has drilling operations in Biafra, Venezuela, Guyana and Indonesia, the latter due largely to the massacre of millions of Indonesian communists. (See below)

(Mrs. Allen E. Charles' husband's law firm is one which represents Ducommun's Lockheed among others, and Judge Benjamin Cushing Duniway is a director of Shluge Lock Co., San Francisco's largest industrial firm.)

(The booklet Through the Looking Glass has information of interest on others of the Trustees and their corporate and political ties. It may be obtained from any SDS member for 25¢)

STANFORD RESEARCH INSTITUTE-- ITS CORPORATE AND MILITARY FUNCTIONS

Stanford Research Institute was created in 1946 to service the needs of government and industry, and now it does 47% of its work for the Department of Defense and 20% for international corporations. In 1968, SRI did \$6,246,000 (10% of its funding) in work for the Pentagon on Southeast Asia.

In the early 1950's, SRI's defense of this concentration was blatantly imperialistic. Then-president of SRI Jesse Hobson told the American Institute of Engineers in 1951 that:

"this nation occupies 6% of the land area of the world, has 7% of the world's population, but now produces 50% of the world's goods and possesses 67% of the world's wealth... Research must be the heart, the foundation, the life blood of our present defense economy if we are to maintain this position."

Since the 1950's, SRI policy makers have been quite aware that communist-nationalist movements challenge this position. Ed Robison, Vice President of SRI International, told a gathering of Stanford Alumni in 1957 that "the free world must not lose Southeast Asia...as it has already lost China." Simultaneously, SRI researchers studied "Limited Warfare" for McDonnell Aircraft. The study maintained that though "for indigenous participants, limited warfare is likely to appear as civil war", it was actually (outside) "aggression" and the US should "counter" it.

SRI IN VIETNAM

Moving from the theory to the practice of counterinsurgency, SRI concerned itself with the socio-political development of South Vietnam in the early 1960's. Economist and education professor headed a special government mission there in 1961 to bring back suggestions for meeting the Diem regime's "most pressing financial, military, and political needs. After six weeks mainly spent in Saigon, Staley recommended military and economic "measures which could restore security within 18 months" (New York Times). Staley also is accredited with the "Strategic Hamlet Program"... "an intensified population-control measure to enable (the Diem regime) to tighten its hold on rural Vietnamese by grouping them physically into manageable units". (Douglas Pike of USIA in Viet Cong.)

Staley and William Brede, another SRI economist, did an AID study on the development of Cam Ranh Bay, which is consequently becoming one of the major military ports of Asia.

In 1967, Brede also worked on a plan for land tenure reform which AID has tried to impress upon the Saigon regime. The proposal made by SRI to AID stressed SRI's understanding that the program is "considered most important at this time to...produce political results that will contribute to winning the war.

SRI has directly assisted the military effort in Vietnam too. In 1963-64 it performed two contracts for the Army concerning "improvement of tropic military communications." As recently as six months ago, a former SRI employee disclosed that SRI was performing "cost analysis studies of alternative reconnaissance routes (road bombing routes) over North Vietnam." The work may now have shifted to Laos.

SRI has also been studying the "vulnerability of helicopters to groundfire" at Fort Ord. At the SRI Naval Warfare Center, work on toughening helicopter armor to groundfire is being done.

Finally, Lloyd Smith, Vice President of SRI's Physical Sciences Division, admitted that the Institute is presently "designing electronic equipment for intrusion detection in Vietnam. Which means that it is working on the electronic Maginot Line in the DMZ.

SRI-STANFORD CHEMICAL AND BIOLOGICAL WARFARE

In its "limited war" study, SRI researchers remarked that "Numerous military authorities believe that we should never again restrict our freedom of selection of weapons as we did in Korea." During the Korean War, CBW agents were prohibited, The study continued: "It is detrimental to the military situation to positively assure an aggressor or enemy that a particular weapon will not be used." Vietnam.

According to Elinor Langer in Science, "the current CBW program is the products of decisions made and steps taken during the late 1950's and early 1960's". During that time, Professors Philip Leighton and William Perkins conducted research (from the Chemistry Department positions they held) into areas that provided the foundation for the present CBW arsenal of the Pentagon.

From 1959 to 1961, Leighton and Perkins conducted research on "Meteorological Aspects of CBR (Chem-Bio-Radiological) Warfare". The research was divided between Stanford and the US Army Chemical Proving Grounds at Dugway, Utah. Dugway was recently newsworthy when a flock of sheep mysteriously lay down and died one morning due to an overdose of nerve gas. According to CBW expert Sy Hersh, an SRI-designed nozzle on the test plane malfunctioned, releasing a full tank of lethal nerve gas which began to blow toward Salt Lake City and was fortunately diverted by a rainstorm.

Dr. Leighton was Professor of Chemistry from 1937 to 1962. He is now an Emeritus Professor. In 1960, Perkins was Associate Director of the Stanford Aerosol Laboratory, run by the Departments of Chemistry and Chemical Engineering. He was also on the Army Chemical Corps advisory board.

Their work was total research; on diffusion, weather effects, etc. upon CBW agents, "for all climate and vegetation and terrain situations" (Langer) By June 1961 their research had progressed to the point where "trials (were) being conducted in a mountain - valley complex..."

The significance of this research is unavoidable, especially when one reads that five of the seven chemical agents currently listed in the Army Manual "Employment of Chemical and Biological Agents" are disseminated as aerosols, while the other two are airborne. As Miss Langer points out "the idea of disseminating infectious agents by aerosols...seems to be displacing earlier notions about how to transmit disease."

SRI researchers learned to make the aerosols whose effects and use Perkins and Leighton had found. After Wilfred Skinner (SRI organic chemist) and Richard Cadle (atmospheric chemist of SRI) discovered for the Chemical Corps the "fundamental information on

...solution to problems on the dissemination of chemical agents." SRI got a contract (1963-66) "for investigations of incapacitating chemical materials" for \$1,100,000, later renewed for \$2,500,000.

SRI has also worked with CS tear gas, used to "flush out people" from shelters in Vietnam. It can be lethal. Northrup Corporation (above) whose President Tom Jones is a Stanford Trustee, received a \$4.4 million contract in 1968 to produce "CS-1 riot control agent".

At present, SRI has \$404,000 in chemical warfare contracts and won't discuss them further. It has, in addition, proposals pending of at least \$96,000. SRI is always available to the Pentagon, whenever the latter decided to wage its "war without death" program.

SRI: THAILAND

SRI's projects in Thailand were done for Project AGILE, the Pentagon's world-wide counter-insurgency research program. Initially SRI developed tactics and weapons, testing them for use in Vietnam. But with the increase of Guerilla activity in Thailand in 1966, the program turned toward counterinsurgency techniques for the Thai oligarchy, and toward putting the US in a knowledgable position" should "largescale intervention in Thailand be called for".

That intervention has been well underway for several years now; over 50,000 servicemen are divided between manning the B-52 airbases, the huge Sattahip naval station and training the Royal Thai Army and Thai counterinsurgency forces.

It is important to note that Thailand is a military dictatorship, though SRI considers it to be another "Asian bastion of strength for the free world." Despite strong bureaucratic control, rapidly growing insurgent movements are emerging in the Northeast, the North and the South, largely in frustrated response to their neglect or exploitation by both the central bureaucracy and its foreign business friends. Urban racism against rural groups contributes to guerilla strength, now estimated at about 5,000. Bangkok has responded to tribal resistance with napalming and systematic herding of tribesmen into "detention camps".

Leaving aside the question of the Thai investments of Stanford Trustees and SRI directors for the moment, SRI has helped the US government to "stabilize" the Thai situation.

In 1964, William Platt, SRI's Director of Manpower and Educational Research, concluded a study (AID) to "make recommendations as to the appropriate and required machinery in the Thai Government of the integration of human resources and educational planning with the planning for over-all economic and social development." The growing social upheaval in Thailand demonstrates how US style "development" run by a well-entrenched native oligarchy, has not worked. And the Thai military government, the US and SRI are therefore turning to a largely military solution.

THE BANGKOK OFFICE AND PEOPLE SNIFFERS

SRI presently has 43 permanent paid staff members working alongside Michigan, Cornell, and RAND teams at the Thai-US Military Research and Development Center in Bangkok. SRI's work includes testing

devices which "can literally sniff an enemy's presence by the very odors of his body, food, or clothing" (Time, Oct. 7, 1966). They also write ethnographies of "unstable areas", analyze military communications required to repress "medium level insurgency in the North-east", and write confidential reports on "communist terrorist camps" in the South.

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(SRI's Russell F. Rhyne has been testing a magnetometer developed by Varian Associates (a Stanford Industrial Park resident) as "a method of detecting quantities of iron of a size comparable to insurgent weapons, likely for the establishment of a McNamara Line on the Mekong River.

Finally, SRI renewed at least \$1,800,000 in Thai contracts this winter, in the face of requests not to renew its counter-insurgency projects while a Stanford Student-Faculty committee studies its operations and ties to the university. The request was obviously polite, proper and ineffective, though the study may have some value.

SRI AND INTERNATIONAL CORPORATIONS

U.S. corporations depend heavily on cheap raw materials from the Third World; and the growth of profits off the underdeveloping countries since World War Two has paralleled the growth of Stanford-based industries, though the two are not absolutely correlative. From 1950 to 1964, US direct investment in the underdeveloped nations was 9 billion while income on this capital flowing back to the US was over 25 billion. The economic tragedies underlying these statistics can be read about in Paul Baran's The Political Economy of Growth or in other works. Suffice it to say that those countries could not compete with US capital power sufficiently to determine their own destinies, and that most of them are poorer now than they were a hundred years ago.

SRI, not surprisingly, actively encourages corporations to move into Southeast Asia, (witness Hobson and Robison's statements above). SRI performs long-range studies of Southeast Asian investment opportunities for US corporations and sponsors business conferences overseas as well (recently in Sydney, Jakarta and Singapore).

Edward Robison told an audience of SRI associates in 1965, two years after the 1965 military coup in Indonesia when over 250,000 Indonesian and Chinese leftists were massacred, that the Indonesians had "cut out the cancer that was destroying their economy". It was a bloody operation, he said, but "SRI has done and is doing what it can to advise Indonesia and to draw the attention of potential entrepreneurs to the need and the opportunity now presented for constructive and profitable investment". Robison went on to say who would profit: "The Australians and the Japanese are already in the field... the large-scale petroleum industry, which is mostly American, is expanding its operations. American firms have made important new commitments for mineral resource development..." One of these oil firms is Stanford Trustee Gardiner Symonds' Tenneco.

Other Stanford Trustees and SRI directors are also deeply invested in Southeast Asia, partly due to the guarantees against profit losses by war or insurrection of the Thai government. Labor unions

are illegal in Thailand, (which is often synonymous with Southeast Asia given its safeness and high level of Stanford based investment).

Union Oil's drilling in Thailand was mentioned already. Union's President is SRI Director Fred Hartley, and its Directors include Trustee Arthur Stewart. Trustee Richard McCurdy of Shell Oil helps to manage the largest oil refinery in Southeast Asia.

Utah Mining and Construction Company is directed by Ernest Arbuckle, who is a Trustee, an SRI director, and former Dean of Stanford's Business School. He is as important in directing the overseas interests of the whole Stanford complex as Terman and Packard are in managing their domestic counterparts--all three men's involvements are quite international nonetheless. Utah has been heavily involved in building the USAF's B-52 bases in Northeast Thailand, where much guerrilla activity occurs. Arbuckle also directs Castle and Cooke, a manufacturer of steel pipe in Thailand. Trustee Littlefield joins Arbuckle as Utah's president, and Stanford Vice President for Business Alf Brandin is a Utah director.

According to a March 25 article in Business Week, Weldon Gibson (president of SRI International, sees "great potential for SRI in the Pacific Basin because of the rapidly developing triangle trade among the U.S., Japan and Australia.

A Pacific Basin Strategy to keep Japan from doing trade with China, North Vietnam and North Korea is angering many Japanese, as American planes on Okinawa and further American domination of the Area keep a dangerous if somewhat profitable status quo in Asia.

Unfortunately, Arbuckle's role in the Stanford School of Business in promoting this strategy among faculty and students there is unknown at present; however it is probably similar in many respects to his role in promoting Latin American involvements. (See other SDS and Peninsula Observer articles for description of the latter.)

THE SCHOOL OF ENGINEERING AND THE STANFORD DEFENSE COMPLEX

A third major element of the Stanford defense complex is the School of Engineering. Most of the applied research for the Pentagon centers in the Electrical Engineering Department's Systems Techniques Lab (STL). STL handles \$1,000,000 in defense contracts this year, of which 6 out of 8 are classified. "Unclassified" reports often may not be released to parties outside the military without military approval.

An Electrical Engineering Department publication explains that STL is "an on-campus research program whose objective is to offer a close and immediate coupling between the results of academic research programs and the most advanced needs of military electronics in such areas as countermeasures..." Yet since the growing sophistication of electronic warfare (EW) requires fundamental research desired by the University, STL can carry on an "exploratory research program in electronics" with federal money while the Pentagon receives a steady flow of new theoretical approaches and techniques for EW.

In Pentagonese, EW protects our electronics from the incursions of the

enemy and attempts to deny the enemy his electronic capability. In layman's terms, EW operations jam Radio Moscow, monitor guerrilla communications and (until recently and probably soon again) foil SAMs and radar-directed anti-aircraft fire over North Vietnam. Air Force LT. General Jack Catton recently stated that "It turns out that not everybody is crawling around the jungle in black pajamas... EW is being employed more extensively today in SE Asia than in any previous conflict."

Professor William Rambo, director of the EE research program, confided that "if the EW research hadn't been having some military impact over the past 16 years it would not be refunded." Thus STL's work since 1950 has helped to create the present generation of weapons being used in Vietnam.

A second EE publication explains that "Many Stanford countermeasures projects begin with theoretical system studies, followed by design and construction... and finally field and/or flight testing." Commercial companies, often in the Stanford area, pick up STL's techniques and manufacture hardware for the Army or the FCC.

Several Stanford Professors sit on both the boards (or advisory committees) of companies that specialize in manufacturing EW equipment and on the Pentagon's EW advisory committees.

Professor Rambo consults for Applied Technology Inc. a resident of the Industrial Park. "Most of the company's products ...gather information concerning an adversary's electronic capabilities or ...impair the operational effectiveness of certain enemy weapons." ATI's president and vice-president each spent 6 years in Stanford's Applied Electronics Program. Rambo is also on the DOD Advisory Group on Electronic Warfare and the Army Electronics Command. James Angell, another EE professor, is also on the latter.

One final case study will suffice here. Allen Peterson of the EE Department is both assistant director of the SRI Electronics and Radio Science Division, and a director (along with David Packard) of Industrial Park resident Granger Associates. Granger makes the electronics equipment for the US reconnaissance planes that study North Vietnam. Depending on the year, Peterson can be found consulting for the Institute for Defense Analysis, ARPA, or the Air Force Scientific Advisory Board.

CONCLUSION

We hope that people will feel the human waste and destruction underlying these cold and technical realities, and that eventually the vast technological potential of this area will be put to the service of human need, both here and in the Third World.

Q: MAKE Trustees meetings open on campus.

Hewlett
Durham
Chas. L. ...