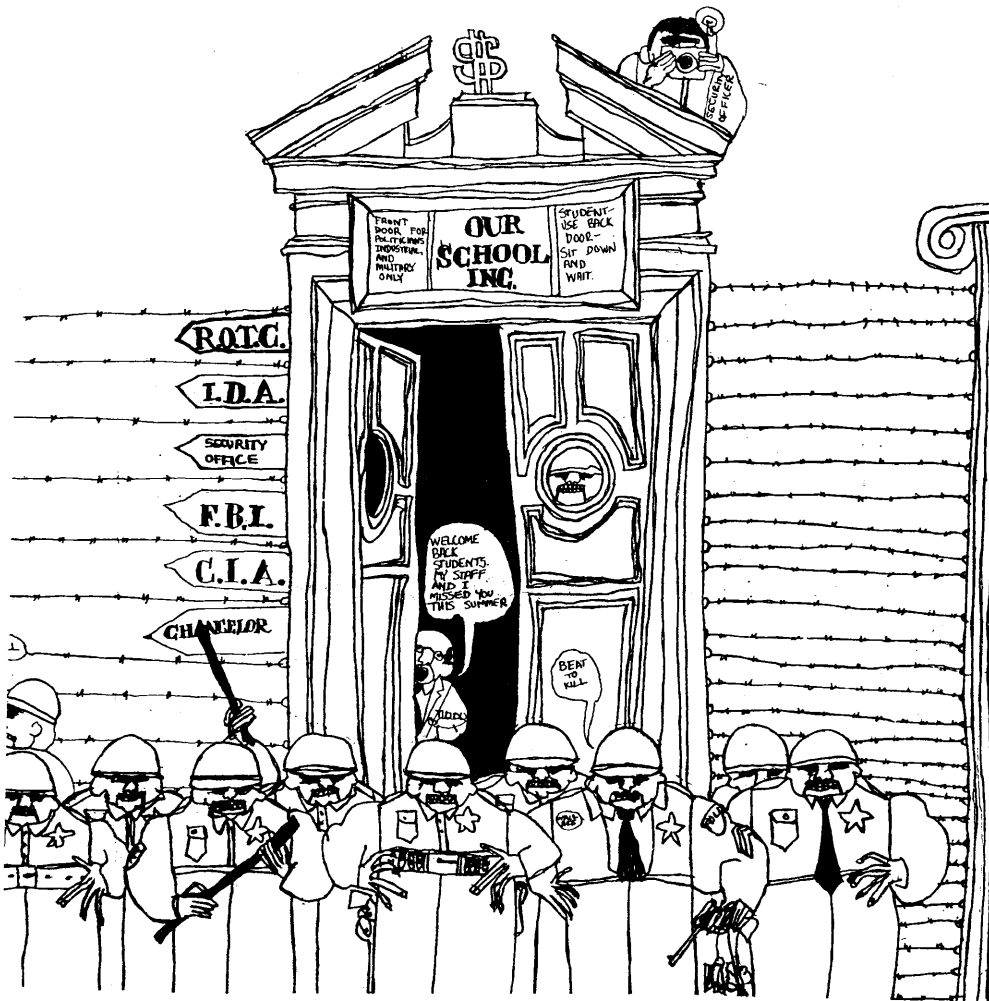


indicator

**dare to struggle
dare to win**



Students Attack War Research

The war not only continues despite massive and repeated protest; it expands both in scope and brutality. Over the last two weeks, the struggle to end the war has also increased. Large and militant demonstrations against war research and ROTC have occurred at UC Berkeley, University of Oregon, Penn State, Harvard, and University of Kansas, to name a few. Anti-ROTC actions were seen as a way of directly fighting the war and also bringing home to students how their university was involved in supporting the war.

Opposition to the war is growing. At MDM's (Movement for a Democratic Military) anti-war rally on April 18th in Balboa Park, SDS called for a meeting the next day to discuss what was happening in Santa Barbara and Berkeley. Fifteen people, including several members of SDS, met. They decided that the best way to show our support was by building a strong anti-war movement at UCSD. Remembering what happened last year when James Rector was killed in the People's Park movement, the possibility of a student strike was mentioned. But last year the strikers learned that even a total boycott of classes could not stop the essential functions of the university; research, recruitment, and administration. It is these functions which directly aid the war effort. In fact one war-researcher from IGPP stated in one of his graduate classes, 'I wish you students would go on strike again because I would then have more time to do my research.'

It was decided that everyone at the meeting would call their friends and put up posters to announce a meeting for 11 AM Monday morning, April 20th, to discuss an anti-war action which might be taken that day. SDS, having gathered quite a bit of information about war research on campus last summer, felt that war research and military recruitment should be the targets of our anti-war activity here at UCSD.

Until 10 AM Monday we believed that there would be an EOP rally at 1 PM after the ecology convocation at noon to discuss the cutting of the EOP budget. We had arranged with the people in charge of the EOP rally to have several speakers to discuss the anti-war action planned by the group at the 11 o'clock meeting. At the last minute the EOP rally was combined with the ecology rally.

About 50 people met at the 11 AM meeting. After a hurried and inadequate discussion some students decided that they would have a sit-in at the Grants and Contracts office. At 12:45 after several people had finished speaking at the ecology- EOP convocation, a student stood up and called for all those students who were interested in directly fighting the war

Image Restoration - Pure Research ?

The Visibility Laboratory (VL) and the Marine Physical Laboratory (MPL), both divisions of the Naval Electronics Laboratory (NEL) at Point Loma, are operated and staffed by the Scripps Institute of Oceanography. As everybody probably knows by now, much of the classified research contracted for by this campus is done at NEL in the belief that the intervening distance purges and purifies the university of the taint of imperialist war. But the smell is still strong - let's follow it and see what we find.

Siebert Q. Duntley, director of the Visibility Lab, is a professor in the department of Applied Physics and Information Science (APIS). So is Victor C. Anderson, the associate director of MPL. Why are they connected with NEL? Image restoration for the CIA and the military.

Image restoration is a process for rapidly interpreting video tapes taken by high altitude reconnaissance airplanes. More area can be covered by a computer than by a man or several men looking at regular photographs. The principle of image restoration is easy to understand. The reconnaissance plane takes a video tape of objects on the ground (or underwater or elsewhere) at a known angle and a known altitude. This provides a source of electronic impulses that can be scanned quickly by the computer. The computer can be taught to look for certain kinds of things - troop columns, trucks, aircraft installations, etc. - that is, certain patterns of electronic impulses.

You may recall from calculus that any curve can be reduced to a mathematical equation by Fourier analysis. Simi-

larly the two dimensional shape of a three-dimensional object as seen from a certain angle can be reduced to mathematical formulas that can be programmed into a computer. The better the formulas, the better the computer can see, and the improvement of the formulas is a crucial part of CIA funded VL-APIS research.

APIS does basic research in image restoration; VL does practical production work for the CIA and the military. So that explains the close collaboration between APIS and VL. Down at VL, the CIA uses an IBM 360 model 44 computer for their work. It runs 24 hours a day processing video tape films which are brought directly from Vietnam and other countries in which the CIA and military have an interest. The "digital image

cont. on page 6

'Evil always has a name, an address, and a telephone number' Brecht

Friday's (April 24's) Triton Times contained a barrage of attacks on SDS and other students who have begun to attack the military research done at UCSD. The attacks ranged from outright denials of military research "on campus" to attempts to justify it as not all bad. The article entitled "Secret Research Works Discussed" opened up with a statement by the academic senate that secret work was incompatible with the "educational function of the University". It continues with York's statement that no classified work is done on the La Jolla campuses although it is done at Point Loma and McGill's statement that professors are as free to consult for federal agencies as they are to write a book. An article by Granger Morgan of APIS later claims that although some people work on making bigger and better bombs others subvert the military by getting military money for non-useful research. He also goes on to say that things such as infrared photography are not used just by the military but to "help Latin American agricultural development".

However, none of these attempts at white-washing can hide the university's role in developing American military might and, in general, helping big businessmen rather than American and Third World workers and peasants.

One of the main attempts to cover up research at UCSD involves the geographical location of the research. As York said, classified research goes on in Point Loma at NELC. Two important UCSD labs, the Visibility Lab and the Marine Physical Lab (as well as most Scripps research ships), are located in Point Loma at NELC. These labs are staffed by UCSD professors and researchers and their grants are administered through UCSD (see grant to visibility lab from CIA in leaflet that appeared last Wednesday, for example). The geographical distance does not change the nature of the work or its connections with the University. It merely keeps the secrecy of classified research physically separated from the classrooms; it keeps it out of the view of the majority of UCSD students and workers. This is the essence of the Academic Senate resolution partially quoted in the Triton Times. It's not that classified or military research cannot be done, but that no security guards are provided by the University and security areas are not to be located too near students (see the Academic Senate resolution, reprinted in full, on page 6).

We must also look carefully at McGill's statement that professors are free to act as consultants for whom they want. UCSD owes its existence and its rapid growth to defense department money and grants. The faculty and the money are attracted by the "big-time" DOD professors here—York, Penner, Brueckner, etc. (see letter on this page) Even the removal of the security safes was not due to concern of the administration over classified research, but because they were discovered by SDS. (see interview with Brueckner, page 6)

The UCSD administration is not absolved of responsibility. One must also question the flippant statement that professors are as free to do military work as they are to write a book. The people on the receiving end of this research, the workers and peasants of Southeast Asia and Latin America who are killed by the U.S.'s weapons, disagree. Doing military research is not the equivalent of writing a book (which is not a function of a professor, but a requirement if he wants to keep his job).

Dr. Morgan's statement about subversion of the military sounds incredibly naive. A researcher does not have control over the results of his research. This control lies with the grant-giving agency. If that agency is the defense department, it will probably be used for military ends. He should look at the Mansfield amendment (see article this issue) which now requires that all defense department research be mission-oriented. The rest of his argument is that good 'spin-offs' result from military research. These 'spin-offs' however are just what their name indicates. They are not the goal of the research or the main use of a device, but some useful thing that just happened to turn up. Infrared devices are not used and were not developed just to aid agriculture, but to locate guerilla fighters. (It was a device of this sort that was used to locate Che Guevarra, for example.) And whose land are they developing in Latin America? Most land is controlled by U.S. and Latin American big businessmen. It would seem that these devices are being used to help United Fruit in either case.

Some other people who have spoken of benevolent spin-offs of military research are the commanding officer of NEL (Navy Electronics Lab) at the 'seminar' on April 14, and professor Nachbar on the plaza last Wednesday. Nachbar (mentioned in the Wednesday leaflet) said that his research is purely mathematical...and that research he had done on an army transport led to the 707. He later admitted that his work is essential to the development of better missiles (as students had been contending). The officer from NEL denied that NEL had done any of the work for perfecting better weapons, as put forward by SDS and other students, and he, too, talked about good spin-offs. Now, NEL is being investigated by the FBI for a security leak. The information generally known about NEL on this campus was not thought to be public knowledge. The captain was lying when asked about these weapons, because that information is classified. For example, he absolutely denied that CIA research was done at NEL, yet we have seen the leaflet of Wednesday which shows that CIA research is done at the Visibility Lab at NEL.

The point is that UCSD does serve the war through its research (and of course through military recruitment) and that administrators, researchers, etc. will do everything they can to protect this role by whitewashing, silence or lying. However, if you are against the war, you must try to hinder the U.S.'s ability to continue exploiting peasants and workers around the world. We must attack this research and recruitment which takes place on this campus. We must not be fooled by the lies and the barriers put in our way. People like Morgan and McGill say we should protest war research, but attack us when we really do so.

Federal Funds and the Growth of UCSD

The following is an excerpt from a document on funding by S.S. Penner.

From: Dr. S. S. Penner

January 27, 1969

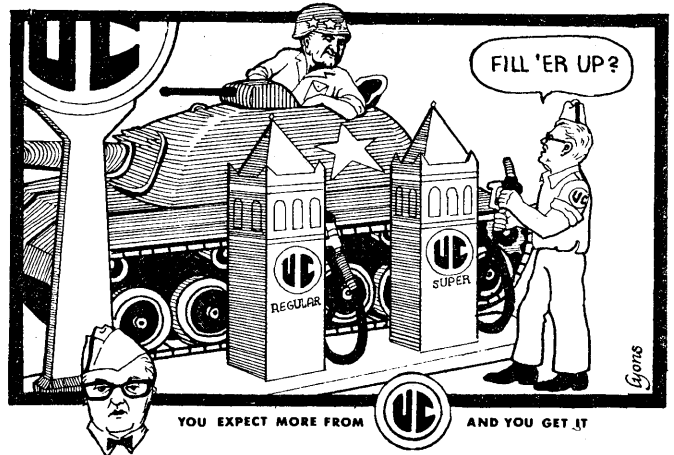
UCSD DEPARTMENT CHAIRMEN

Subject: Non-State Funding and the Development of UCSD

I believe that the Brueckner policy reflected reasonable optimism about growth of FTE allocations from state resources and was successful in the sense that it led to the very rapid acquisition of distinguished faculties in the pure and applied physical sciences and mathematics. Implementation of the Brueckner policy did not lead to unusual and unexpected funding difficulties because of the unique reputations and fund-raising capabilities of its sponsors with such affluent agencies as the Atomic Energy Commission and the Advanced Research Projects Agency of the Department of Defense. The extent of campus involvement and dependence on the efforts of a few individuals may be judged, for example, by the fact that Professor Brueckner was personally chief investigator on contracts and grants totalling about one and one half million dollars per year at the time when he took his current leave of absence from UCSD.

There are very clear indications that the economic climate in which we operate is rapidly changing. There are few, if any, individuals with demonstrated fund-raising capabilities or interests close to those of K. A. Brueckner. There is disaffection on the campuses with dependence on tax moneys allocated through agencies of the Department of Defense. There is criticism of the universities in the Defense Establishment on the grounds that the unclassified studies performed by professors and their students are too remote from applications to justify expenditure of federal funds and that the system, as now used, amounts to nothing more than a special subsidy by taxpayers for particular university operations at a time when these same funds are urgently needed for other purposes that clearly have higher priority from the point of view of military planners. The budgets of the National Science Foundation and of the National Aeronautics and Space Administration have also been severely cut. A number of our principal investigators have had the funding levels of their contracts and grants reduced or have suffered outright termination of support. As the result, I have received quite a number of requests from several of the physical science departments for emergency allocation of funds and/or FTEs. I believe that this trend will continue and may well accelerate.

CURRENT FUNDS INCOME — UCSD(1967/68)		CURRENT FUNDS EXPENDITURES — UCSD (1967/68)	
State of California	29.6	Organized Research	47.2
U.S. Government	48.7	Instruction and Department Research	15.6
Student Fees	2.0	Hospital	18.5
Teaching Hospitals	14.9	Student Aid	2.3
Auxiliary Enterprises	3.5	Libraries	4.0
Endowments and Donations	.9	Administration	2.6
Others	.4	Maintenance and Operation	3.8
		Institutional services	1.0
		Auxiliary Enterprises	2.8
		Others	2.2



indicator

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ONLY A WORKER-STUDENT ALLIANCE CAN END THE WAR

Workers really are hurt by the war and, therefore, have the greatest need to fight against the imperialist policies that have led to the war. Workers have been helpful in providing information about University research. Professors, on the other hand, have attempted to protect the University and its research. Professors have benefited from defense contracts and University war research in many ways and cannot be expected to reject policies they even helped to formulate as advisors to the President, Under-Secretary of Defense, etc.

As pointed out in the leaflet, workers have not bought the argument that strikes for higher wages are against the "national interest" during the war in Vietnam. They have refused to make any additional sacrifices for the bosses' benefits and can be won to fighting the war and imperialism.

During the student strike last year, following the death of James Rector, research and recruitment continued, even while the vast majority of students were out of class for several days. This strike showed that the training of students can be suspended for short times with essentially no effect on the functioning of the University. Workers, on the other hand, can swiftly shut down the campus, war research and all.

Building alliances with workers can make both student and worker struggles much stronger--in the case of student struggles, it means the difference between winning and losing. Students need an alliance with workers to win, and workers have a great need to win struggles against the U.S. rules, their government, and their lackeys.

**BUILD A WORKER STUDENT ALLIANCE!
ALLY WITH CAMPUS WORKERS!**

The following is the text of a leaflet that was distributed by SDS to working people around San Diego in support of the MDM rally on Saturday, April 18th.

Workers =
Vietnam is a BOSSES' war--
it can only HURT workers!

The United States government and its puppet regime in Saigon are not killing millions of Vietnamese for you. On the contrary, the war serves only the interest of American big businessmen, but it is American working people that pay for the war, die fighting it, and stand to lose the most from any end to the war except immediate withdrawal of all U.S. personnel and materiel.

Why do the owners of America's large corporations force us to fight this war in Vietnam, Cambodia and Laos? Because easily accessible raw materials are running out in the United States and strong fights by American workers have raised wages relatively high, so business looks elsewhere for cheap labor and resources. Investment in Third World countries by American corporations is increasing enormously, and many companies including Standard Oil, Anaconda Copper, IT&T, Chrysler and Heinz Foods now make more than 60% of their profits from foreign investment! And companies that do not exploit these cheap labor and resource supplies are simply unable to compete with those that do.

This expansion into Third World requires governments which tolerate exploitation of their land and people by U.S. companies. Where such governments are not in power, the U.S. government installs one--Cambodia is the most recent example. When masses of people resist, the U.S. government sends troops, as in Vietnam and the Dominican Republic. The Vietnamese resistance has been remarkable--the Vietnamese have been fighting back against foreign exploitation for several decades--against Japan, France, and now the United States. This has only been possible because workers and peasants have been waging a People's War, a fight by masses of people against imperialist aggression.

How does all this hurt American working people? First, it hurts their struggles for a better life. The copper miners in Nevada and Montana lost their militant, well-organized, 8 month strike in 1968 because Anaconda could meet most of its orders by increasing production in its mines in Chile. And a few months later, when the Chilean miners struck, the American workers kept the U.S. mines operating! During the recent General Electric strike, the bosses threatened (in a full-page ad in the New York Times) that unless the strikers gave in, GE would move more of its production to Japan. And Henry Ford II recently stated that, "In South Korea, Taiwan, and Indonesia, we see an attractive supply of cheap labor." Of course, the U.S. plays an active role in keeping the wages low - governments the U.S. has installed in several of these Far East countries have outlawed labor unions (South Korea, South Vietnam, etc.)

Second, workers, not the corporations or the men who own them, pay for the war with their taxes. At the beginning of World War II, workers paid only 45% of Federal taxes, but, in 1970, they will pay 68% of the total, according to government figures. And unlike the rich and corporations enjoying over \$50 billion in tax "loopholes", workers can't use these expense accounts, depletion allowances, tax exempt bonds and other devices to escape taxes.

Third, working people die fighting this war--not the bosses, or even the sons of the bosses. College deferments and the special privileges that often await college-trained servicemen keep them off the front lines. On the other hand, black and brown men account for a very high percentage of the casualties in the war--10% of the population is black; 3% of the population is Mexican-American, but 24.4% of the casualties are sustained by black men and 18% by Mexican-Americans.

Workers, thus, have the greatest need to end the war, and they have the power to do it. The war would come to a grinding halt if basic industry were shut down. And workers know that their strikes, like the GE and postal strikes, hurt the war. But workers realize that "national interest" just means "bosses' interest" and they have rejected "patriotic" appeals to go back to work.

Politicians differ only tactically--both hawks and doves want to protect U.S. business interests in Southeast Asia and around the world. Students do not have the power, by themselves, to end the war. Working class leadership in the anti-war struggle is essential.



"SHOUTING 'STRIKE! STRIKE! STRIKE!' the postal workers swarmed over the speakers' platform.

"Neither rain, nor sleet, nor court injunctions, nor Nixon's 'national interest,'

nor sellout union 'leaders,' nor secret ballots, nor threats of prison terms, nor U.S. Army or National Guard scabs can keep our postal workers from their right to a living wage."

Students cont.

to follow him and others who were leaving. Thirty to forty people left the gym walked to the Grants and Contracts office and entered. People started looking through files and talking with secretaries. Because people were disorganized and unsure of what to do, it was decided to end the action. There was a meeting that night and one on Tuesday. As a result of these two meetings, tours of classified safes, offices and labs where war-researchers did their work were planned to take place on Wednesday. However the administration had been tipped-off in ad-

vance and had locked these offices and labs. The administration was uptight, but they weren't the only ones. On Wednesday, a leaflet appeared on campus which reproduced 5 of the actual contracts for research between professors on this campus and agencies such as the CIA, the Air Force and ARPA (Advanced Research Projects Agency of the Defense Department). Prof. Nachbar, who was one of the professors whose contract was printed on this leaflet, came out to confront people who were reading the leaflet. He told us that his Air Force contract was

funding the study of mathematical equations that had to do with the structure of airplanes, but kept insisting that this was not war-related and that it made planes safer for all of us. The crowd grew and about 50 people refuted this argument by saying that "beneficial spin-offs" implies that there is another primary object of the research; and when Penner (who also came out to defend her husband's work by saying, "would you rather have a Dr. Strangelove" advising the military) were good speakers for war research and were the ones who should face crowds of hostile students. Neither York (whose contributions to defense operations far surpasses those of Nachbar) nor McGill (who oversees and aids all contracts) attempted to defend their pos-

the Air Force is paying for research about airplanes, it seems incredibly naive or hypocritical to insist that they do not use the research to make better and more efficient bombers. Nachbar later admitted that his work was essential for the building of missiles. In the midst of the crowd several big-wigs were seen wandering around -- York, McGill, etc. It seems they thought Prof. Nachbar and Mrs. itions. It is true that almost anything in this society could be in some way supporting the war (Prof. Nachbar's eloquent example was a can of food). This is precisely what we all must realize; that no one is isolated from the war and that everyone who is against the war must fight against it as directly as he can, cont. on page 8

The University at War - a short

(excerpts from a series printed in the Indicator, Fall, 1969)

Like any other institution in the US, the University has done its share to perpetuate imperialism.* By training officers for the military, by defending military recruitment and by having many of the faculty actively engaged in Department of Defense research, the University is significantly aiding the war in Viet Nam and is a willing tool in the hands of big business, the government and the military. This is what 'university complicity' means. The University is not the 'house of the mind' that the administration and faculty pretend it is; it is more than the 'pure' research center that graduate students and science faculty often think it is. The University is what society's controlling interests want it to be.

IMPERIALISM AND THE MILITARY

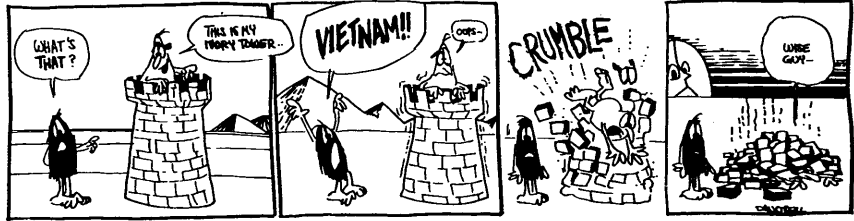
The Department of Defense is an organization that wages war, develops counterinsurgency movements, carries out imperialist national policy, and consumes approximately 80 billion dollars a year. To list the expenditures of this department is a formidable task. In 1966 the hearings on Defense Department appropriations required 2,136 pages to record. The number of projects, programs, departments, analyses, etc. is staggering. All this planning, all this money works toward the same end: protection of U.S. investments.

ENTER THE INTELLECTUALS

Prior to 1960, things were not going well for the planners in the Defense Department. Generals were the strong men in the Department and they generally tried WWII solutions to national liberation movements. The Department stagnated, new ideas were not forthcoming and U.S. investments were in danger. Committed to fight in places like Viet Nam, they did not know how to carry out the struggle.

In January of 1961 President Kennedy took office and things began to change. He realized the nature of the struggles of the future and set out to make the military capable of fighting guerrilla war. Kennedy and MacNamara understood that in the future the oppressed peoples of the world would be rising up to throw out the United States from their lands, so they then set out to overhaul the Defense Department. Long range planning with emphasis on guerrilla warfare was begun.

Cost analysis, systems analysis, operations analysis—these were the procedures enforced by MacNamara and his assistant Charles J. Hitch, now president of the University of California. Civilian control was firmly established and intellectuals began to take over the job of military planning. Kennedy's pets, the Green Berets, were greatly expanded and given new responsibilities. Sent to Viet Nam, Laos and Bolivia, they helped train dictator's armies to crush guerrilla movements. The 1st Air Cavalry division was assembled marking the first major attempt to completely mechanize a fighting force. Policy planning groups were instituted at the highest levels. Their purpose was to introduce technological developments into the military as fast as possible. The powers of the Directorate of Defense Research and Engineering were expanded. New emphases were given to that position. Prior to Kennedy, this post was concerned mainly with nuclear war and



missiles. Now the Directorate, which controls all research throughout the Defense Department, has new tasks. Under its control are Tactical Warfare Programs, Southeast Asia matters, Strategic and Space Systems, Chemical and Biological Warfare, and the Advanced Research Projects Agency (ARPA). It is through ARPA that CIA money is channeled; it is through ARPA that some of the programs and policies used in Viet Nam were evolved.

Kennedy, MacNamara and Hitch also recognized the need for highly trained people in the Defense Department. Every field of the natural and social sciences is represented in military research. Psychologists, sociologists, anthropologists and philosophers have heard the call and work for the military. Their job is to study the populations of countries like Viet Nam and Venezuela. They write handbooks for the Green Berets, develop psychological techniques, and advise on political factors.

SELL OUT

This need for science and technology was met in two ways: massive government funding of basic research at universities and industry, and the development of 'non-profit' organizations such as RAND and IDA. The massive funding of basic research has brought the universities and the federal government so close together now that separation is virtually impossible. Besides the Defense Department, this funding was accomplished through several agencies. Among them are the Atomic Energy Commission (AEC), the National Science Foundation, the National Aeronautics and Space Administration (NASA), and the Public Health Service (PHS).

These agencies are concerned with developing a large scientific base upon which technology can expand, hence aiding industry and the government. The AEC is concerned with developing nuclear power. It makes all the nuclear bombs for the military and also funds research in solid state physics and high energy physics. More than a quarter of a billion dollars goes to the University of California from the AEC. NASA is primarily concerned with the development of missile technology and the space program. The military has a keen interest in the space program, for as the RAND corporation said in 1946: 'Since mastery of the elements is a reliable index of material progress, the nation which first makes significant achievements in space travel will be acknowledged as the world leader in both military and scientific techniques.'¹ The NSF supports research in physics, chemistry, math and the social sciences. By telling people that their research is neutral and pure, they hope to build the illusion that science can be advanced without the military, industry and the ruling class being aided. The PHS which funds biology and social sciences also puts forth the same line: research is neutral. However, as science and technology have advanced, the US's ability to expand its industry and to exploit has increased.

The massive funding by the government in all of the basic sciences has had the purpose of strengthening the ruling class's grip around the world. As universities receive more and more money from the government, they fulfill their purpose in serving the ruling class.

The Institute for Defense Analyses

Perhaps even more overtly connected to universities than the RAND corporation is the Institute for Defense Analyses. IDA was formed in 1956 by five top universities: MIT, Stanford, Tulane, Case Institute and the California Institute of Technology. In the IDA publications, the section entitled 'How IDA Came To Be' What It Is' explains that after the Korean War 'the US as the strongest member of the free (sic) alliance undertook to support the preservation of peace for a protracted period by the maintenance of military power sufficient to deter aggression.² The arms race had begun to develop, new types of warfare needed to be dealt with and the Department of Defense realized that universities would provide the essential scientific and technical expertise. The original member universities were joined by Michigan, Chicago, Princeton, Columbia, Penn State and the University of California.

In 1967 the Board of Trustees of IDA adopted certain clarifying 'principles of operation' and stated 'Its (IDA's) primary orientation is towards the needs of the Office of the Secretary of Defense and the Joint Chiefs of Staff'.³ IDA's initial function was to provide the scientific and technical support to the Weapons Systems Evaluation Group (WSEG), but it now holds contracts with the Advanced Research Projects Agency, the National Security Agency and—most recently—the Department of Justice. The research for WSEG and ARPA consists principally of studies of the effectiveness of proposed weapons systems, particularly missile systems. IDA's total receipts for DOD contracts in fiscal 1967 amounted to \$15.8 million.

It became apparent that IDA would not be able to rely solely on those scientists who had consulted for the military during WWII and Korea. New blood would have to be recruited, and so the JASON division of IDA was formed in 1958. JASON recruited some of the elite scientists in the United States, offering them the unique and very desirable opportunity to work on IDA projects while remaining on their home campuses, coming together for several weekends a year and for several weeks every summer.

Also around this time IDA changed its character slightly and began to do different kinds of studies, not in the realm of the physical sciences, but most relevant to the 'national security'—i.e. to the maintenance of US imperialism. IDA began to emphasize research on counterinsurgency and unconventional warfare. This work has included studies of the utilization of chemical and biological warfare and tactical nuclear weapons in counterinsurgency. According to IDA's annual report 'JASON's

work in 1966 related primarily to two of the larger issues of nation security: the ABM and the war in Vietnam.⁴ In ballistic missile defense, Jason's primary contributions related to studies on the phenomenology of ballistic missile reentry and on anti-ballistic missile systems integration. This latter study was especially timely in view of the Government's decision to deploy the Sentinel ABM system. In its other major program areas, Jason continued work on technical problems of counterinsurgency warfare and system studies with relevance to Vietnam.'⁵ (5)

Most recently IDA has turned its attention to the domestic scene. Under a \$498,000 contract with the President's Commission on Law Enforcement and the Administration of Justice, IDA made a report which recommended the application of military counterinsurgency systems to antiriot operations. Another recent study was "an analysis of the effects of the draft on the supply of both first-term enlistees and officers."

About a year ago IDA's structure was reorganized. Sit-ins and other agitation, led primarily by the SDS, against university sponsorship of an organization involved in secret defense contracts led to a cut of all legal ties with the universities, putting the management of the new corporation into the hands of a maximum of 24 trustees, at least one third of whom must be active members of the academic community. However, articles in both the May 30, 1969 issue of Science and the August 18, 1969 issue of Scientific Research explain that taking classified research off campus does not hamper the cooperation between the DOD and universities.

The new IDA structure is designed to satisfy critics and the clients alike; it makes no substantive change. 'I don't think you will see any radical changes (in IDA's work)' says Alexander H. Flax, a trustee and its new vice-president for research. 'We don't expect to divert the research of IDA into civilian projects. That would be inappropriate'.

UCSD'S OWN

Conspicuous in this crew of professors from UCSD who have relations with IDA



The gaggle: Brueckner, Penner, York.

*Imperialism: Imperialism is the name given to that stage of capitalism in which production is concentrated in monopolies, banks assume major roles in financing, massive export of capital occurs i.e. investment in underdeveloped countries, and the world is divided up into 'spheres of influence' by the capitalist powers. It is the system that—in order to survive—must make colonies of other countries, use their raw materials and land, control their economy, enslave their people.

analysis

is Dr. Keith Brueckner, professor of physics and a member of the Institute for Pure and Applied Physical Sciences. Brueckner has had long and intimate relations with the Department of Defense, big business and "think-tank" agencies. Some of Dr. Brueckner's activities: IDA, RAND, General Dynamics, Aerospace Corp., Gulf G.A., General Motors and the Advanced Research Projects Agency. At IDA, Brueckner is a member of the JASON division.

Brueckner has other activities which are seldom mentioned on campus. He is west coast research director of Heliodyne corporation, which has a branch office on Sorrento Valley Road—specially made for Dr. Brueckner. Virtually all of Heliodyne's work is classified by the Department of Defense. See Table 1 for a selected list of contracts of Heliodyne Corporation.

Brueckner has further interests over at the Aerospace Corp. in San Bernardino, California, where he does classified research on missile technology. This work supplements his studies at IDA's Jason division where he works on the ABM. Some of the contracts he has researched at Aerospace Corp. are: 1) Contract AF 04(695)-669--The Production of Electric Fields by Ionizing Radiation, Secret Report, Restricted Data, 2) Contract AF 04(695)-669--(classified Title), Secret Report, Restricted Data, Descriptors: Shielding, 3) Contract AF04(695)-669--The Effect of Magnetically Trapped Fission Betas on Missiles, Secret Report, Restricted Data.

Brueckner's devotion to the military research bosses does not stop at Aerospace Corp. At General Dynamics Convair he and Dr. Halpern (physics) investigated Contract Nonr-2914(00)--Guide Line Identification Program for Antimissile Research, Secret Report, Restricted Data. Brueckner has also researched for Convair a report entitled "Use of a Fog to Provide Shielding Against Thermal Radiation", Secret Report, Restricted Data. Also, Con. AF 29(601)-1946 and Con. AF 29(601)-1150--Physics of Nuclear Explosions in Space.

In light of Brueckner's vast ability to perform classified research, he is given a privileged position here at UCSD. The Institute for Pure and Applied Physical Sciences is Brueckner's home here on campus. Surrounding himself with his cronies like Dr. S.S. Penner, Brueckner carries out research for the Department of Defense and the AEC. The University for years has provided police security guards at night to protect the government security safes in the offices of IPAPS.

Besides Brueckner, the following professors are members of Jason: Dr. Norman Kroll (physics), Dr. Walter Munk (IGP?). The following faculty members in addition to the above mentioned are members of IDA: Dr. Herbert York (physics), Dr. William Nierenberg (Scripps), Dr. S.S. Penner (AMES), Dr. Sinai Rand (AMES), and Dr. Daniel Olfe (AMES).

MISSILE MAN

Dr. S.S. Penner, former vice-chancellor, pal of Keith Brueckner's and head of IPAPS, is a member of the Institute for Defense Analyses. Dr. Penner's specialty is missiles and propellants. He wrote a book about propellants for missiles used in Vietnam by the military. He used to be editor of the "Journal of Missile Defense Research"—a journal internal to IDA and the Defense Department. There is no doubt that Dr. S.S. Penner has had a hand in the decisions concerning missile deployment from tactical weapons to the ABM.

Another professor who has been engaged in the missile controversy is Dr. Herbert F. York (physics), acting Dean of Graduate Studies and former chancellor of UCSD. In 1959 Dr. Herbert F. York appeared before the committee on Armed Services of the Senate to testify on his nomination to be Director of Defense Research and Engineering. According to Dr. York "My entire professional life except a few years has been spent on defense problems." (6)

In the biography of Dr. York we find a whole list of facts about Dr. York: From 1944-5 Dr. York was on the Manhattan Project. In 1950, as coleader he undertook the design and execution of a major diagnostics experiment for Operation Greenhouse at Eniwetok Proving Ground. In 1952, when the Radiation Lab at Berkeley decided to include weapons development and other classified programs in applied science, Dr. York was selected to lead the Laboratory program at Livermore, Calif. Under his supervision, the Laboratory made major contributions to the varied research programs of the AEC. By 1954 he was Director of the Livermore Laboratory (where the hydrogen bomb is made). In 1958 he became Director of Research, Advanced Research Projects Division of the Institute for Defense Analyses and Chief Scientist of the Advanced Research Projects Agency of the Office of the Secretary of Defense in the Pentagon. In 1959 Dr. York was made Director of Defense Research and Engineering which controls the Advanced Research Projects Agency. This post is equivalent to an assistant secretary of defense. (Much CIA money goes through ARPA--some of it goes to Scripps. After his stay in the Pentagon, Dr. York has contented himself with the aca-

Faculty 'strikes back' by demanding more collaboration

Constant student protests against UC-collaboration with big business and the military (by research and ROTC) have finally provoked some sort of faculty 'response'. They called a committee together and came up with the idea of providing the on-going war research and ROTC programs with a costume of academic respectability thus hoping to cool students. Please read carefully these excerpts from last week's LOS ANGELES TIMES:

Stronger UC Control of Arms Projects Urged

But Faculty Unit Supports Principle of University Role in Weapon Research

26 Part I-Thurs., Apr. 23, 1970 Los Angeles Times + Board Backs ROTC, at UC--With Changes

BY NOEL GREENWOOD
Times Staff Writer

ROTC should remain on University of California campuses but should also undergo "substantial changes and improvements," a special commission has recommended.

The commission, appointed by UC President Charles J. Hitch in 1969 to study the ROTC question, advised Hitch:

"The commission believes that the university, because of its interest and obligations as a public institution, must continue to participate in the education of students who aspire to become officers of the armed forces of the United States as regular or reservists."

Turning to the vocal opposition against campus ROTC programs, the commission said:

"These attitudes are often charged with emotion and affected by strongly held political and social views. The commission recognizes that while some of the attacks on ROTC are politically motivated, there are legitimate academic criticisms of ROTC."

"The committee supported the principle of university involvement in war weapons research, declaring: '... in the current context, paragon learning in mission-oriented endeavors for national defense cannot be construed as legally, politically or morally reprehensible.'"

"Nuclear weapons serve as a deterrent, the committee said, termed 'less than useful' suggestions that weapons research be unilaterally reduced or abandoned."

"Last year, \$16.2 million in federal funds was allotted to the university for weapons research at the two facilities—compared to the university's total budget of \$59 million.

About 80% of the work at Livermore and 65% at Los Alamos are devoted to research and design of weaponry, most of which involves nuclear and thermonuclear devices.

The laboratory operations involve the full process of nuclear weapons development, from originating concepts to assessing the results of tests, the committee noted in a 31-page report.

Little Control Detected But the committee found that the university exercises comparatively little control over the facilities...

11689

HELIODYNE CORPORATION B

SYSTEMS SCIENCE & SOFTWARE F

DATA COMPUTING SERVICE H

PRECISION MACHINE CO. K

INTEGRATED CIRCUIT DEVICES INC. K

TECHNICAL PRODUCTS SALES L

CONTROL DATA CORP. Q

TABLE 1

- Classified Research at Heliodyne (San Diego, Van Nuys, Los Angeles):
1. Optical Tracking Research
 2. Re-Entry Physics Research
 3. Turbulent Reacting Wakes: Boundary Layer Formulation of Partial Mixing-3 parts
 4. A Study of Unsteady Turbulent Wakes and Entrainment
 5. A Review of Hypersonic Re-entry Wakes and Auxiliary Studies
 6. A Variational Methodology for Turbulent Shear Flows
 7. Some Results of the RMV-A Experiments
 8. Some Applications of Ideas of Information Theory to Fluid Mechanical Problems
 9. On Radar Discrimination of Chaff Systems: Preliminary Results
 10. An Analysis of High Altitude Beta; Preliminary Results.
 11. An Analysis of the Wxo-atmospheric Penetration Aids (EPAP) Sounding Rocket Tests at WTR
 12. A Thrust Termination Port Study
 13. Preliminary Results of Spectroscopic Temperature Determinations in Flow Fields of Mark 6 Re-entry Vehicles
 14. Opacities of Ablation Products/Air Mixtures L-V
- Source: Technical Abstract Bulletin, 1967-68

democratic life combined with defense work. He has been a science advisor to several presidents, served on several defense department panels and is on the Board of Trustees of the Institute for Defense Analyses. As a member of the Board, he is responsible for the major decisions taken by IDA, including the decisions concerning the Vietnam war. Dr. York is also on the U.S. Arms Control and Disarmament Agency.

Dr. York tries to put up a liberal cover for his defense work. He runs around bleating about the evilness of the ABM. In his article in Scientific American, Dr. York finally shows his true colors: "In addition, the ABM debate has served to highlight more serious issues (for example the implications of MIRV for the arms race) and to raise serious questions about other weapons systems. For instance, I suggest that we have also found that silo-based missiles will become obsolete." What Dr. York is saying after pages of liberal arguments that miss the point is that the ABM shouldn't be built because the missiles it will protect aren't worth protecting.

As far as missiles go, Dr. York has been very helpful to the military. Senator Jackson once remarked: "One of the greatest contributions, I think, made during this period is a matter that Senator Symington alluded to in one of his questions to Dr. York, and that is the reduction in the size and the increase in the yield of the warhead.

"It is in this area, I think, in all fairness, that Dr. York has made a great contribution. This has had an enormous impact on the development of our missile system in that naturally with a lighter warhead, we have been able to get along with a lot of other things that take a long time to work out in the development of a good ICBM and a good IRBM." (7)

The hypocrisy of the liberals like Dr. York is further brought out in an ad that appeared in the New York Times in 1967.

In this ad, Dr. York and Dr. Brueckner signed their names in an appeal to the President to "Stop the Bombing". At the same time these two "scientists" were active in IDA work. Dr. Brueckner, of course, was involved in Jason division, and Dr. York was on the Board of Trustees of IDA. Who are they trying to kid?

Dr. York's thin liberal facade also includes the McCarthy campaign. In 1968, he campaigned on the McCarthy slate of delegates in the California primary—while he was on the Board of Trustees of IDA. These are the kind of men who support the Moratorium, liberals who do defense research on one hand and drive out peace on the other.

Senator Richard Russell of Georgia had this to say about Dr. York when he appeared before the armed services committee:

"Dr. York, I want to commend you. I do not recall at any time a man who has been before this committee in his first appearance who has met with such universal approval and commendation as you have.

"We are all hopeful when we see men of your stature who are willing to come down here and help us in what is perhaps the most important single activity of the Government, on which our security and future life depends.

"Thank you very much." (8).

In the fall of 1967, our renowned Academic Senate decided to remove classified research from the campus. Hoping to build the illusion that UCSD would then be an "ivory tower of free inquiry", the faculty completely ignored any business ties and defense work done by professors. The resolution was drawn up by the Committee on Educational Policy of the Academic Senate and was passed on November 8, 1967. However, there is some

Brueckner admits to security safes on campus

This interview was held with Dr. Keith A. Brueckner at the very end of the 2nd quarter. Dr. Brueckner is a professor of physics and assistant director of IPAPS (Institute for Pure and Applied Sciences.) He has consulted for Los Alamos Laboratory, the Aerospace Corporation, General Dynamics, Gulf General Atomic, General Motors, Brookhaven National Laboratory, the Rand Corporation and the Institute for Defense Analysis. He is west coast research director for Heliodyne Corp. Much of his work has been defense research - the ABM system at IDA, the Vietnam war, nuclear weapons. Dr. Brueckner was one of three men who organized the JASON division of IDA. JASON deals with two main problems: the ABM and counter-insurgency work in Vietnam. Dr. Brueckner is a key man in the university and in defense research. Last fall the Indicator in its series of articles on military research indicated a lot of Dr. Brueckner's activities. This is an edited portion of the interview with Dr. Brueckner

SDS: When we were researching the IDA, it came to our knowledge that within IDA there was at one time, - I don't know if it still is - an Advanced Research Project group.

Brueckner: There's a Research and Engineering support division which was retitled two or three years ago and that supported the Director of Defense Research and Engineering on the technical level. There also was a social systems group, an economics group, which has been in existence for seven or eight years. Did you have a question about this?

SDS: Yes. It says in the annual report that IDA, when it did consulting, consulted to certain specific groups.--

Brueckner: That's right.

SDS: The Weapons Systems Evaluation Group (of the Department of Defense)

Brueckner: Yes.

SDS: -and the other was the Advanced Research Projects Agency (of the Department of Defense).

Brueckner: Yes.

SDS: -and I was wondering if there is any connection besides just at the very top, between IDA and ARPA. How did that influence contracting? Would ARPA come to places where there is a concentration of ideas and personnel or pretty big names in IDA like yourself and Dr. York at one time?

Brueckner: I think that at the institute here (IPAPS), the ARPA funding reflected my presence and Penner's presence here when it was started. So the answer is yes.

SDS: In your biography, there is an indication that you worked for the Rand Corporation.

Brueckner: Yes, I consulted for the Rand Corporation off and on during the fifties and sixties, I still have contact with them every few weeks, every month or two on some technical problems.

SDS: Could you outline the general areas? Brueckner: Problems in re-entry physics, weapons effects, (nuclear), and war games.

SDS: Are these problems general, or are they related specifically to the war in Vietnam?

Brueckner: I deal with the problems of strategic warfare - the problems of re-entry physics are the problems of missiles. Limited wars tend to be based on technology developed a decade ago.

SDS: You mentioned the difference between doing classified research here and somewhere else. Certain things would be rather obnoxious to have around, that is closed off areas etc. Last year, about this time, it came to the attention of members of SDS that there existed on campus such things as security safes. I thought that that was a very big thing

in itself - it did not close off any areas or anything like that, but it did require a police guard. The university police checked the offices specifically every night. When they found that SDS had discovered them, they doubled the guard, specifically at your office. We found quite a few security safes - one in your office, one in Dr. Lieberman's office and in Dr. Nierenberg's office - and according to Dr. Penner there are something like 15 to 20 of these safes spread out on upper and lower campus. Security safes in general hold information of confidential order, and may be secret but not usually top-secret - that requires different systems. Why are there so many security safes on campus? That seems to me to imply that some kind of classified work is being done, either through contract or in consultation with some agency - Rand or JASON, etc. Are you aware of the extent of this?

Brueckner: I would have guessed we had about that number on campus. Take York, he is a clear example. York was a member of PSAC, the President's Scientific Advisory Committee, and was vice-chairman for a time. This required him to handle material of a confidential nature for the President. The attitude was that a safe was needed to keep it in. Involvement with the Rand Corporation or IDA does require one to deal with classified matters and those documents have to be held secure. There are people doing off-campus work for the government generally or for non-profit corporations or industry in some cases, there's classified material, secret, confidential, and that's held in secure areas.

Image Restoration continued...

dissections' are used to plan counter-insurgency in Vietnam, Laos, Cambodia and elsewhere.

It is believed that almost 90% of all VL money comes from the CIA and top-secret military groups like the Advanced Research Projects Agency (ARPA) of the Department of Defense.

The chairman of the department of APIS is Dr. Henry G. Booker who works on top-secret Defense Department panels. These panels, by Dr. Booker's own admission in a letter to the Committee on Educational Policy (CEP) in 1967, deal with the implementation of technology into the military. Under Booker's direction we see the results of this: collaboration between the APIS staff and the VL staff on image restoration for the CIA.

This collaboration goes even further. Last year a student who was killed in a car accident was a self-professed CIA paid student informer. We have reason to believe that this was true and not just mere "mouthing-off". He informed several people that he reported on occasion to Dr. Henry G. Booker of APIS and implicated him as a CIA operative. The picture becomes clearer now: Booker, CIA member and member of top-secret Defense Department panels, heads a department that does the theoretical work for VL, which does the practical work for the CIA.

'Pure research'?

Report of the Committee on Educational Policy on Classified Research at UCSD

The San Diego Division instructed its Committee on Educational Policy on October 18, 1966, to study and report on issues of classified work on campus.

On October 20, 1967, the chairman of the Division was advised in writing by the Vice Chancellor for Graduate Studies and Research that it is the policy of the UCSD Administration not to sponsor classified research or conferences on the upper or lower campus. In line with this policy, the Administration has permitted no restricted areas on campus in the recent past.

It appears, then, that UCSD is presently involved in classified activities only to the following extent.

A. Part of the regular research of two UCSD laboratories, the Marine Physical Laboratory and the Visibility Laboratory, is classified. However, the latter work is carried out off campus. A small number of UCSD students, employed in these laboratories, have contact with the classified projects, but no student receives degree credit for classified activity.

From time to time, UCSD also administers other classified research or conferences that are housed off campus.

B. A substantial number of individual faculty members act as consultants on classified government projects. In connection with such consulting, UCSD provides security arrangements for the handling of classified information.

C. There are one or two UCSD contracts supporting unclassified research on campus which have been executed as classified contracts. This has apparently been done only to facilitate consulting: A classified contract makes it easier for the government to call upon the investigators for advice on classified matters related to their research.

Although it sees no immediate danger in the present situation and wishes to commend the Administration on its policy, CEP remains concerned about the issue of classified activities on campus. It feels that it would be desirable for the Division to record its position on the matter, and offers the following statement of principles and related recommendations as a guide. The adoption of such a statement would serve to buttress the humanistic ideals of the University, while at the same time maintaining the freedoms traditionally accorded to faculty members and to research.

1. Classified or secret work of any kind is incompatible with the educational functions of a university campus. Experience elsewhere has shown that secret work leads to functional and physical compartmentalization of a campus in conflict with the atmosphere of open inquiry we regard as fundamental to the health and integrity of the University. Classified research frequently requires guarded security areas and always involves limitation of access to knowledge. We believe it inappropriate for the University to engage in secret research using facilities ostensibly dedicated to the open dissemination of knowledge.

Circumstances may of course arise, for example, in times of grave national emergency, when the Administration and the Faculty agree that classified research constitutes an essential public service by the University. Even in such circumstances, arrangements should be sought to conduct this research off campus, in so far as possible.

CEP recommends that the Division record its opposition to the conduct of secret research projects (or classified parts of otherwise unclassified projects) on campus and that it ask the Administration to reaffirm this policy.

2. Work for which a student receives University credit should always be open to scrutiny by the faculty and the public. In particular, it should continue to be UCSD policy that no student may fulfill part of his degree requirements by classified activities.

3. It should not be the policy of the Division to oppose any UCSD research project on the sole ground that it is sponsored by an agency such as the Department of Defense of the Atomic Energy Commission, or by a private organization. If the research activity is not classified or secret and is of general scientific interest and if the source of support is not concealed in any way, the Division should not attempt to interfere with it. The normal processes of campus criticism are considered sufficient to provide effective control of abuses.

4. CEP recommends that the Division should place no restrictions on individual faculty members in their public service activities. Faculty members should continue to be free to act as consultants for outside agencies. However, if the consulting requires classified research, such research should be carried out off campus.

(The last paragraph was deleted from the statement that was approved by the Academic Senate on November 14, 1967.)

The Committee on Educational Policy respectfully urges departments and individual faculty members to seek support for their research with some thought as to the purposes of a university, and to carry on their off campus activities always so as to avoid bringing the University into embarrassment or disrepute.

see the homes of the stars

tours wed. noon from the sds table

MEETING TO PLAN ACTION AGAINST
WAR RESEARCH WED. NIGHT
7:30 IN LOWER BLAKE LOUNGE

uni war cont.

correspondence to the CEP which enlightens us to some of the complex semantics professors get into and also tells us some interesting information on Dr. Henry Booker of APIS.

In his letter to the Chairman of the CEP dated Oct. 26, 1967, Dr. Booker tells us:

"Nevertheless, there are certain things that puzzle me about this matter. According to the statement attached to your memorandum the Vice-Chancellor for Graduate Studies and Research has stated that 'classified research is not currently conducted on the UCSD campus.' However, an article in the LA Times on Monday, Oct. 16, 1967, by William Trombley under the heading 'Federal Spending Cuts Felt in UC Programs' states that 'UC received \$15.7 million in Defense Department funds in 1965-66 for research, much of it classified, at UC Berkeley, UCLA and UC San Diego.' How are these two statements to be reconciled? I strongly suspect that the expression 'on the UCSD campus' needs to be defined. It should certainly include the upper and lower campuses, but probably not Point Loma. Without such a definition the proposed statement on classified research at UCSD is ambiguous. "The statement on 'essential public service' requires consideration because of the inserted phrase 'in times of grave national emergency'. Is this a time of grave national emergency? I am currently serving on a Top Secret Department of Defense panel concerned with a development that would cost the taxpayer more than one-billion dollars. I have no personal desire to serve but feel that it would be unreasonable to refuse. The project is not connected with the Viet Nam war. It is part of a continuing policy to apply developing technology to the armed forces."

While Booker and the rest of the faculty ponder such deep metaphysical problems as what constitutes the campus, the defense research goes on unabated. To argue that the labs at Point Loma are or are not part of the campus is an absurd way to think. What counts is that these labs are under University control. University personnel perform the research.

It is interesting to note that Dr. Booker seems to be very humble in his approach to Defense Department research--an attitude that implies that it is a dirty job but he must serve when called. Well, he's been called for years to do this kind of research. After Dr. York, Dr. Booker is probably the most important man on campus for the Defense Department. Besides pulling in contracts for the APIS faculty and counseling student informers, Dr. Booker is a key man in the implementation of technology into the highest levels of the military. Dr. Booker has also spent some of his time working for the RAND corporation where he has published reports on missile effects in the ionosphere and properties of the ionosphere with respect to communications problems.

Dr. Walter Munk of IGPP, a member of IDA and a member of the JASON division of IDA, is another professor who is proud to serve. He once bragged to an Academic Senate meeting last spring about how he was proud to work in JASON and he would not quit that job. Dr. Munk's specialty is geophysics and waves, and he is a world's expert.

Also at IGPP is Dr. Douglas Inman, the world's expert on beaches and coastlines. He was hired out to the contracting company that built the harbors in Viet Nam for the military back in 1965. He is another example of a professor who mumbles about pure research and benefits to mankind and then goes off to aid the imperialists in Vietnam.

SCRIPPS AND WWII

Prior to WWII Scripps was an oceanographic research institute that received very little money from the federal government. Sponsored mainly by the State of California and private sources, Scripps' research, though of high quality, was somewhat limited in scope. However, the World War was to change all this. The military realized that they needed oceanographers, so they went looking for them. "The need for trained oceanographers became apparent early in the Second World War.... The armed forces would have found it impossible to meet the overwhelming need for knowledge of oceanic conditions created by the war had it not been for the existing oceanographic institutions and their willingness to cooperate." (9) And so Scripps went to war.

In 1941 the National Defense Research Council set up a research project under the direction of the University of California. This research in "subsurface warfare" soon developed into the University of California Division of War Research (UCDWR) and was headquartered at the Radio and Sound Laboratory of the Navy at Point Loma. The research at the Navy facilities drew upon many fields of oceanographic research, marine biology, and geophysics. Even today the research in marine biology and other so-called "neutral" fields of endeavor are of great consequence to the military. Scripps "helped ascertain that another puzzling phenomenon, the 'deep scattering layer' which reflected the sonar 'ping' and led to 'false bottoms' or inaccurate echo soundings, had a biological cause. Physicists who had thought they could depend on sound traveling a given distance in a given length of time were surprised to find themselves contending with the whims of microorganism and fishes." (10)

The story of pure research was never promulgated by the staff at Scripps during WWII. On the contrary, the staff members realized the nature of research, especially during the war. "The basic research which had been carried out at Scripps Institution since its inception proved valuable in many ways to the work of UCDWR and the entire war effort. It was impossible to predict which finds might someday have applications, and a limited amount of research not directly related to national defense was carried on at the Scripps Institution during the war." (11)



In 1946 the Point Loma facilities became the Naval Electronics Laboratory (NEL), and after the war the bulk of the staff of UCDWR continued their research under the auspices of NEL. However, the Navy, realizing the necessity of maintaining its ties with Scripps, proposed research of a more fundamental nature to be carried on under conditions which prevail only in universities. These conditions were to be created at NEL.

Vice Admiral E.L. Cochran Chief of the Bureau of Ships, proposed this program to the President of UC, Robert G. Sproul. "The wider intellectual inter-



Photo by Fred Marks

This is a grainy photograph of one of the buildings for the Visibility Lab at Point Loma. The sharp of eye will note that the sign says: University of California, Scripps Institution of Oceanography, Visibility Lab.

ests involved in academic positions would attract more capable personnel to this work and would also militate against the possible stagnation of the program..... It appears that such a program should be of intrinsic interest to the University." (12)

On May 15, 1946 the Marine Physical Laboratory (MPL) was set up as a research division of the University. At the same time as MPL's founding, Scripps was cementing ties with the Navy that would last through the wars in Korea and Viet Nam. The bulk of Navy money, but not all of it, comes through the Office of Naval Research. (See chart #1 for the relationships between SIO, MPL and ONR). Finally in 1948, in order to simplify administrative and financial procedures, MPL was made a division of Scripps. Two other divisions of Scripps have their facilities at Point Loma, they being the Visibility Laboratory (VL) and the applied oceanography group. Also, the Scripps oceanographic fleet makes its harbor at Point Loma.

In table 3 some of the classified contracts and their principal investigators who find their employment at MPL or VL are listed. It is evident that much of the research at MPL and VL is of direct consequence for the military, especially the Navy and the CIA. Overall the research at MPL is mainly in the areas of geophysics, magnetic nonlinear measurements and sonar. According to Dr. Neierenberg, director of Scripps, the research is done for the Navy and is war-oriented. Sonar research is done for the Navy and is aided by the Floating Instrument Platform (FLIP). At the Visibility Lab the main thrust of the military research is image restoration--both oceanographic and atmospheric. This has direct application in aerial reconnaissance for the military and the CIA - especially in Viet Nam where it is used daily.

In Table 2 the money received by Scripps is broken down. More than ten million dollars comes from the Navy. The total amount of money expended at MPL and VL in 1967-68 was almost four million dollars. Most, but not all, of this comes from the Navy. In Table 1 there is a source of money called "other US". This source is a hard one to track down, but not altogether impossible. Several confidential sources at Scripps who have worked at MPL and VL have indicated that some of the \$751,000 comes from the Central Intelligence Agency. This money, we are told, is channelled through the Advanced Research Projects Agency (ARPA)

and the work performed is done under the

Agency	SIO Department	SIO
NSF	57,818	10,666,541
AEC	--	255,108
AIR FORCE	--	473,784
NAVY	41,258	10,665,455
ARMY	--	33,893
NASA	--	231,772
DHEW	562	27,550
PHS	37,457	666,964
OTHER US	4,356	751,313
TOTAL	141,451	23,772,380

Source: Memo to Department Chairman from Dr. S.S. Penner, January, 1969

auspices of the CIA. Periodic checks and reports are made by the personnel of the CIA when they visit MPL/VL every month. Data and results are then related to the war effort and to the intelligence work of the CIA. Considering the nature of this research at MPL/VL and considering the nature of the CIA, this relationship is not too hard to understand.

WHO ARE THE PIPERS?

Commander-in-Chief of the Scripps complex is Dr. William A. Nierenberg, a Vice-Chancellor of UCSD. Dr. Nierenberg has had a long career with the government beginning with World War II. From 1940 until 1945 he was a section leader at Los Alamos in the famous Manhattan Project that produced the first atomic bombs. After the war he returned briefly to the academic world, and in 1950 he joined the physics department staff at UC Berkeley. Using Berkeley as a base of operations, Dr. Nierenberg began his climb into high places. In 1953-54 he was director of Columbia University's Hudson Labs (at which a great deal of military research goes on). From 1960 until 1962 he was Assistant Secretary General of NATO for scientific affairs, a rather important post. Since 1957 Nierenberg has been a special consultant to the Executive Office of the President. Since 1964 he has served with UNESCO; since 1966 he has been on the Government Science Advisory Committee's Naval Warfare Panel, and he is a member of the President's Task Force on Oceanography. And, of course, since 1965 he has been director of Scripps Institution of Oceanography.

Military Funds Mission Oriented

The Mansfield Amendment, Sec. 203 of the Military Procurement Authorization (which supplies all funds for the Defense Department, all armed forces, ARPA, and defense contracted research), states:

Sec. 203. None of the funds authorized to be appropriated by this Act may be used to carry out any research project or study unless such project or study has a direct and apparent relationship to a specific military function or operation.

(Public Law 91-121, S. 2546, Nov. 14, 1969)

The object of this amendment "...in Mansfield's view... (was to) put off pentagon support for about \$400 million a year of 'non-mission-oriented' basic and applied research...". With the passage of this law, the Department of Defense is required to show that each and every research project is "mission-oriented".

The initial reaction from professors and the Department of Defense was to scoff at the Senate's attempt to pin them down; however, this brought fast and angry response from Senator Mansfield. Included in this response was further clarification of the new law. According to Sen. Mansfield, "Sec. 203 contemplates that scientists whose interests and way of work focus upon solving problems may continue to receive military funds provided their research has a direct and visible relationship to military needs," and again, "Sec. 203 makes it abundantly clear to students, to scientists, to officers of universities and not-for-profit institutions and to industrial contractors that money received from defense appropriations for research is needed to carry out a specific military need or function and is directly related to the defense needs of this country." (Read into the Congressional Record by Senator Mansfield.)

The implications of all this could be misleading for it is not the case that Sen. Mansfield or Congressman Rivers (who also supported the amendment) are against military research. Sen. Mansfield states that with respect to national defense work, "...No need is of higher importance...". Rather, this bill was an attempt by conservative members of Congress to curtail the activities of those professors who refuse to do mission-oriented research (see Dr. G. Morgan's article in last week's Triton Times).

Professors appear more concerned with preserving the myths surrounding their own war research ("my work is basic research, it has no foreseeable military application" or "yes, it could be used by the military, but it's really just groovy interesting work and probably won't be used") than with the direct military applications of that research. No longer can this rhetorical handwaving confuse or mislead students. Now, the government itself has eased our job of determining which Department of Defense work is mission-oriented; now, all DOD work is mission-oriented.

The significance of the bill for you and me is that now (as each contract is renewed, reviewed or initiated) the Defense Department will eliminate that work which is not offensive to you and me. This means that all defense work will soon be mission-oriented, and will have "...a direct and apparent relationship to a specific military function". What is a military function when referred to with respect to the United States? It is a euphemism for the killing, maiming, and torturing of the peoples of the Third World. This is the function that each professor aids as he accepts a research contract from the Department of Defense.

END MILITARY RESEARCH

UNI WAR CONT.

graphy.

Dr. Nierenberg is well suited for the job of director of SIO. With such a huge budget and the demands it must meet for the Navy and the CIA, the director must be able to handle everything. Dr. Nierenberg once made the claim that if there was a Department of Defense panel or advisory group, he's been on it. With all these connections in Washington, in the Institute for Defense Analysis, of which he is a member, and in other defense groups, Nierenberg is able to channel money and talent to Scripps. According to University records the budget of Scripps has doubled since the arrival of Dr. Nierenberg. Another reason is, of course, the war in Viet Nam which demands a lot of research.

THE REST OF THE TRIBE

Dr. Nierenberg is not the only man at Scripps who sees the necessity of doing research for the military and the ruling class. A hierarchy of mandarins has been established at Scripps. Several of these people are worthy of note. The director of VL since 1952 is Dr. Seibert Q. Duntley. He is one of the world's experts in image restoration--something the CIA has use for. Since 1940 he has been an active consultant to industry and government, including the Board of Directors of the San Diego Industry--Education Council (1961-63). His special research topics are optics, spectrophotometry, environmental optics and visibility.

Dr. Fred Noel Spiess, director of MPL since 1958, is another expert in the Scripps hierarchy. Originally a nuclear engineer at General Electric Company, Spiess came to Scripps in 1952 and moved quickly through the ranks. His research specialties include ways in which acoustic energy travels through the sea; development of techniques for underwater detection, exploration and communication. Dr. Spiess was also co-developer of the manned oceanographic research buoy. The associate director of MPL is Dr. Victor C. Anderson. He is considered to be the world's expert in sonar and, by looking at Table 3 one can see that he produces a great deal for the Navy and the CIA.

- 1) RAND-the first fifteen years, 1963.
- 2) Annual Report of the Institute for Defense Analyses, 1959, p. 12.
- 3) Ibid., 1968, p. 12.
- 4) Ibid., 1967, p. 16.
- 5) Annual Report of the Institute for Defense Analyses, 1968, p. 25-6.

TABLE 3

The following research reports were listed in the Technical Abstract Bulletin (1965-69) as being classified by the Department of Defense. The various classifications are confidential, secret and top secret. The majority of these contracts were performed by Scripps personnel at the Marine Physical Lab and the Visibility Lab. These research contracts were performed under the auspices of the Department of the Navy and the Central Intelligence Agency. The majority of these contracts had as their principal investigators Dr. V.C. Anderson, Dr. S.Q. Duntley and Dr. F.N. Spiess. The research here is in sonar techniques, reconnaissance and their applications, and in nuclear blast effects.

1. Indirect Water Waves from Large-Yield Bursts
2. Background Radioactivity and Oceanographic Conditions
3. Convergent Aone Bearing Accuracy Measurements
4. Measurement of Secondary Effects, Water Waves

Murphy's Heart Bleeds



MURPHY IS THE ONE ON THE RIGHT

When students at UCSD take action against the war, that is against research or recruitment, Vice Chancellor George Murphy claims that punishing those students hurts him more than it does the students. Or so he says. He claims he is torn by the complexities of the situation--he really wants to protect the students, but HAS to discipline them. Or so he says. He feels a deep concern about the war and the way the country is going. Or so he says.

The Public Information Office

provides this information about previous activities that probably also offended his sensibilities. What did he say then?

Among his awards and activities are: Cadet Colonel, commander of student brigade, ROTC; Distinguished Military Graduate and recipient of the Commandant's Plaque as outstanding graduate, Army ROTC; Military Police trophy, outstanding MPC graduate. He was also an administrator at Berkeley during the Free Speech Movement, 1964.

- 6) Senate Hearing, Committee on Armed Services, Dr. Herbert York, Feb. 5, 1959, p. 2.
- 7) Ibid., p. 6.
- 8) Ibid., p. 7.
- 9) Raitt, Helen and Beatrice Moulton, The Scripps Institute of Oceanography, (Anderson, Ritchie and Simon, New York, 1967), p. 137.
- 10) Ibid., p. 139.
- 11) Ibid.
- 12) Warner R. Schilling, 'Scientists, Foreign Policy and Politics', American Political Science Review 56:288 (June, 1962)

Wednesday continued

not in frustrated, non-political attacks, but with actions and discussions that will build a real movement of students and workers who have the power to stop the war.

There has been a great deal of momentum building to act against war-related research. We have printed the Indicator this weekend so that all students on this campus will have access to all the information we have found in the last ten months or so. All the people who have been active in the last week have found that their actions, leading to a direct attack on the war, have stimulated a tremendous amount of interest and support. There have been many meetings this week, and nearly all of them have been attended by at least twice as many people as there are in SDS. Many, many people have asked the people who are going on trial what has been happening to them and promising their support. Direct action does not "alienate" people as long as the politics of the actions are clearly explained, the support for all those who have begun to take direct actions against the war will grow.

Out of the libraries stride the slaughterers. The mothers stand clutching their children, and stare searching the skies nubby for the inventions of scholars.

Bertolt Brecht