large there seems to be considerable concern—although it is by no means universal—about the effect on social scientists of working for the government. This disquiet existed before Camelot, but the Chilean incident seems to have had a burning-glass effect on it.

A forceful expression of the sentiment is to be found in a recent American Universities Field Staff report by political scientist K. H. Silvert, director of studies for AUFS and an experienced and well-informed observer on Latin America. In his paper "American Academic Ethics and Social Research Abroad," subtitled "The Lesson of Project Camelot," Silvert makes these points.

"No problem of integrity exists for two polar groups of social scientists: those who work inside government on a long-term basis, and those who because of their disciplines, research interests, or convictions stay entirely inside the university world. (A third group, the commercial contract scholar, sells his services where he wishes. His product is sometimes of very high quality. In any event, he does not concern us here because he has neither the pretensions nor the security of the academic scholar.) It is the social scientist working both fields who is in danger of betraying both of his masters through the loss of his powers of independent analysis. And he adds to his other academic difficulties a partial silence imposed by his access to classified materials, so that paradoxically he is often able to muster fewer data for his students than his uncompromised colleagues."

There is no consensus on the view that working both sides of the street inevitably corrupts. On another matter, in which government-supported research figures, however, there seems to be wide agreement.

The phenomenon in question is the gravitation of increasing numbers of researchers—many of them doctoral candidates, recent Ph.D.'s, or incompletely retreaded transfers from other specialties—to certain countries, mainly underdeveloped, with the result that these countries are being excessively and often badly "researched." In certain African and Latin American nations, in particular, government officials are said to be growing weary of being interviewed, often on the same subject, by waves of American social and behavioral scientists. In the new emerging nations many people are reluctant to talk about old, disappearing tribal ways. Quite apart from the Camelot syndrome, many foreign social scientists are skeptical of new American techniques and resent being "used" by well-organized, well-financed North Americans. In the social sciences, increasingly, the problem is not the ugly American but the ubiquitous American.

The problem is serious enough to have been included in a memorandum sent to the board of the American Political Science Association by its current president, Gabriel Almond. In the memo, titled "Problems of Access for Field Research in Foreign Areas," Almond dealt not only with political-ideological problems of the Camelot ilk but also with the matter of "saturation." And the quotes he included from social scientists working in the field indicated that saturation is becoming a serious matter (even if allowances are made for the reactions of old hands who find a lot of new competitors in what they regard as their own backyards).

At its meeting in November the American Anthropological Society, in support of the independence and integrity of its discipline and in behalf of international cooperation, instructed its executive board and secretariat to examine "the widely ramified issues involving the relationship between anthropologists and the agencies, both governmental and private, that sponsor their research. Among these issues are those of access to foreign areas, governmental clearance, professional ethics, and our responsibilities toward colleagues at home and abroad, the people with whom we work, and the sponsoring agencies."

While Camelot exacerbated these issues it certainly did not create them. And there seems to be a general feeling among social and behavioral scientists that, if there had been no Camelot, something similar would have happened somewhere soon.—JOHN WALSH

International Cooperation: LBJ Gets Conference Proposals

The White House Conference on International Cooperation, described by its sponsors as a unique exercise in bringing high-level talent to bear on possibilities for a better world, ran its 3-day course last week. The extraordinary scale of the conference is suggested by its 30 reports, its 29 panel discussions, and the estimated 5000 participants who churned in and out of the meeting rooms to hear one another or to receive the exhortations of such leading U.S. officials as the Secretary of State, the Ambassador to the United Nations, and the Chief Justice of the United States.

As the conference was ending, Secretary Rusk offered an assurance. "I think you will be able to see promptly the footprints of some of your work here," he said. His remark was directed to the question many conference participants must have been pondering: What had they accomplished? Indeed, does any such conference repay the time and energy invested by the large number of persons who take part?

The White House Conference grew out of a proposal made in 1963 by the late Prime Minister Nehru of India that the United Nations observe 1965, its 20th anniversary, as International Cooperation Year. A resolution to that effect was adopted by the U.N.; the member nations were left to carry out the observance each in its own way. In October 1964 President Johnson announced that a White House Conference would be called to "search and explore and canvass and thoroughly discuss every conceivable approach and

avenue of cooperation that could lead to peace."

A Cabinet Committee on International Cooperation, representing 22 agencies of the government, was appointed and placed under the chairmanship of the Assistant Secretary of State for International Organization Affairs, Harlan Cleveland (later named ambassador to NATO and succeeded as assistant secretary by Joseph J. Sisco). Early in 1965 the President appointed a National Citizens' Commission on International Cooperation.

Science and Technology

The 235 members, drawn from business, industry, publishing, education, and other fields, included more than 40 prominent individuals from science and the universities. Among the scientists were Detlev W. Bronk, president of Rockefeller University and past president of the National Academy of Sciences; George B. Kistiakowsky, professor of chemistry at Harvard and science advisor to President Eisenhower; Jerome B. Wiesner, dean of Massachusetts Institute of Technology's School of Science and President Kennedy's science advisor; and Isidor I. Rabi, Nobel laureate in physics at Columbia.

Science and technology were major, often central, considerations in the work of more than half the 30 committees formed by the Citizens Commission and the State Department's International Cooperation Year (ICY) Secretariat. The topics assigned committees, for a canvass of possibilities for new or improved forms of international cooperation, included education, health, population, agriculture and food, meteorology, communications, aviation, space, conservation and development of natural resources, atomic energy, arms control, and disarmament. The "science and technology" committee dealt with earthquake prediction, oceanography, hydrology, and a number of other subjects not given to other groups for separate study.

Several hundred recommendations for private and governmental action were contained in the committee reports submitted to President Johnson. If many of the ideas were not new, at least they were given greater currency by being advocated by a prestigious panel. The effect of some recommendations, such as the one by the meteorology committee for continuation of U.S. participation in the "World Weather Watch," was merely to endorse on-going programs.

In one of its major recommendations the Science and Technology Committee, chaired by Bronk, emphasized the value of a "systems approach" in applying technology to the needs of the less developed nations. "The application of technology does not take place automatically or easily, but is an extraordinarily complex and difficult process," the report said. "Moreover, in many cases political and social progress must take place before the introduction of new technology is feasible. A concerted, cooperative attack on the overall problem, therefore, is required . . . to ensure a balanced, optimum solution to the *whole* problem."

The committee proposed establishing international research facilities in appropriate regions throughout the world in which representatives of various disciplines (including the social sciences as well as the physical and life sciences) would seek to apply technology to regional needs.

"They would try out new technologies, seeking to modify them to suit specific regional needs," it said. "They would stimulate innovation, conduct experimental research on regional problems—above all they would strive for creativity and imagination, breaking away from the traditional in an unending search for solutions to problems that have long defied man, perhaps because he [has] sought the answers alone without the cooperation of others. In housing, for example, experiment with brand-new materials, untried processes and techniques, radically different designs to determine . . . what is the best shelter for man in a given environment—hot humid jungles, hot dry desert, the cold north, or in rural areas versus urban centers."

The Space Committee, chaired by Joseph V. Charyk, president of the Communications Satellite Corporation, noted the importance to developing countries of civil engineering, dealing as it does with such matters as transportation facilities, sanitation systems, water resources, and power projects. "A satellite system could be used to link large central computers to civil engineering input/output stations located in remote areas, thus providing access to computer services which would otherwise be beyond the reach of most countries," the committee said.

"Such a computer-based system for civil engineering practices, given global application through communications satellites, would provide direct assistance in the development of the basic resources of countries throughout the world," it added.

The committee also suggested using satellites to tie television stations together on an international scale. It indicated that such a system would be useful for education and the spread of scientific information such as new medical findings. Other proposals by the Space Committee included one for the U.N. Committee on the Peaceful Uses of Outer Space to begin work on a draft convention assuring all nations of free access to the moon for scientific purposes.

The Committee on the Peaceful Uses of Atomic Energy, which Rabi chaired, observed that the building by a single nation of accelerators in the 200-Bev class is feasible, but suggested that larger accelerators—in the 600- to 1000-Bev class or even larger—should be built and managed jointly by the U.S., Western Europe, and the Soviet Union. The panel recognized, however, the technical and nontechnical problems confronting such a project; it proposed, as an intermediate step, additional long-term exchanges with the Soviet Union through which U.S. scientists would be allowed to use the Soviet Serpukov 70-Bev accelerator that becomes operational in 1967. This was but one of the Rabi committee's recommendations; a number of the others were concerned with safeguards to prevent nuclear materials and equipment intended for peaceful uses from being diverted for weapons.

Arms Control Argument

The Arms Control and Disarmament Committee, which was chaired by Wiesner, stirred the sharpest conference debate—especially between private participants and government officials. The panel that discussed the committee's recommendations attracted substantial press coverage and a massive gathering of conference guests. The Wiesner group's numerous proposals included one for a nonaggression pact between NATO and the Warsaw Treaty Organization, an idea apparently no more popular in the State Department today than it was when Khrushchev used to advocate it. The committee indicated that, in the search for *détente*, "some general loosening of NATO ties" must be accepted—a viewpoint emphatically

Arms control and disarmament panel at White House Conference on International Cooperation. From left, the panelists are John Fischer, editor of *Harper's*; Carl Kaysen, professor of political economy at Harvard and a former presidential aide on national security affairs; former Governor Harold Stassen of Minnesota, a disarmament negotiator in the Eisenhower Administration; Jerome B. Wiesner, dean of Massachusetts Institute of Technology's School of Science and formerly the President's science advisor; John J. McCloy (panel moderator), former disarmament negotiator and once U.S. High Commissioner in Germany; Adrian S. Fisher, Deputy Director of the U.S. Arms Control and Disarmament Agency; John M. Leddy, Assistant Secretary of State for European Affairs; David J. Popper, Leddy's director of Atlantic political and military affairs; Glenn T. Seaborg, chairman of the Atomic Energy Commission.

rejected by government panelists and by the panel moderator, John J. McCloy, a former U.S. disarmament negotiator and once U.S. High Commissioner in Germany.

The committee had various suggestions for halting the spread of nuclear weapons and containing the arms race. One widely publicized recommendation was that the U.S. and the Soviet Union agree—"explicitly or tacitly"—to a 3-year moratorium on deployment of antiballistic missile (ABM) systems such as the Nike X. ". . . A U.S. or a Soviet ABM system would almost certainly induce both superpowers to step up their strategic weapon programs in an effort to ensure their respective 'deterrent' capabilities," the committee said. In addition, it said the basic question of the ABM's military value remains unanswered.

The ABM recommendation might have received less notice if the committee members had not included Roswell Gilpatric, who until a short time ago was Deputy Secretary of Defense. No officials rushed to embrace the proposal, but the public attention given it could make it easier for the government to defer once again the decision on whether to deploy the ABM—even if the major consideration should be, not arms control, but a desire to avoid costly new weapons programs while the expense of the Vietnam war is still mounting.

The conference discussion of the arms control report was especially vigorous, but a lively dialogue developed on some other subjects as well. This must be considered in deciding whether the conference was worth the time and effort that went into it. Wiesner was "quite impressed" by the conference, which he said made the public more aware of the conflicting viewpoints on arms control questions and may even encourage greater flexibility within the administration (though officials have tended, not surprisingly, to defend existing policies). He told *Science* that the conference was also valuable in that it forced him and others who worked on the reports to redefine their views in the light of changing circumstances.

Frederick Seitz, president of the National Academy of Sciences and a member of the President's Science Advisory Committee (PSAC), found the conference useful primarily as a forum for public discussion of ideas previously discussed only within small groups such as PSAC and the NAS committees. "I think it stirred the pot and got a lot of things out in the open that had been talked about," said Seitz, who served as moderator for the panel on science and technology. Also, he suggested that the conference reports and recommendations will be useful "reference points" for the development of future programs and policies.

The conference appears to have been well designed for the widespread dissemination and discussion of ideas. Robert S. Benjamin, head of the United Nations Association of the U.S.A. and chairman of the National Citizens' Commission on International Cooperation, described the conference's "widely spreading root systems." "Among the members of the National Citizens' Commission and of the committees which prepared the working papers for this conference was the leadership of more than 400 national organizations," Benjamin said.

"In addition," he said, "one committee alone solicited the views of more than 100 specialized professional associations. The participants who have so enriched this conference are identified with at least 550 organizations, 90 corporations, and 89 educational institutions and foundations. This suggests not only what has been poured into this conference but also the many lines leading out into the body politic of the

country." He might have noted, too, that a number of prominent journalists took part in the conference, including the editors of *Harper's* and the *Saturday Review* and the editorial page editor of the New York *Times*.

Secretary Rusk promised that the conference reports would be carefully considered. If the White House screens the reports for promising ideas, as President Johnson has indicated it would, the results of the conference could become tangible indeed. Already, among the government officials who served as conference panelists or as consultants for preparations of the reports, there have been ideas planted and new associations formed that could stimulate policy development.

Arthur Roe, head of the National Science Foundation's office of international science activities, said that, as a consultant to the Committee on Science and Technology, he found himself and representatives of other agencies looking at problems which they had never previously considered together in a meeting of this kind. The other consultants were from agencies such as NASA, the Atomic Energy Commission, the Agency for International Development (AID), and the Departments of State, Defense, Interior, Agriculture, and Health, Education, and Welfare.

John D. Wilkes, AID's science director and a consultant, said the conference had given him a better feel for what his scientific colleagues are thinking. "A conference focuses on certain priorities," he said. "You get a sense of the degree of push there is for certain advances and breakthroughs." The question of priorities, Wilkes indicated, is crucial in his own agency, which currently has a research budget of only $12 million.

If the chief value of the conference was to bring to the government the opinions and ideas of talented people from private life, it also gave the government a platform from which to express its own views. Most of the work of the conference was concerned with technical means of international cooperation, but Secretary Rusk and Ambassador Goldberg emphasized the pressing questions of war and peace. Rusk, in what some observers felt was one of his better performances, was at pains to stress the lengths to which the U.S. has gone to try to enter meaningful discussions with Red China and North Vietnam. If his message made an impression, Rusk's time was well spent, for many of his listeners had seemed to take a more sanguine view of the possibilities for cooperation with the Communist powers than the one commonly held in official Washington.

The conference took place at a time when the administration is unusually sensitive to criticism of its foreign policy. Despite some rumblings to the contrary, however, there is little evidence that the administration made much of an effort within the conference to repress criticism. Judging from the outspoken exchanges over arms control, one might as easily conclude that the conference was a "runaway."

Some conference reports would have been more critical of government policy if it had not been decided several weeks ago, when drafting of the reports was well advanced, that they should represent the views of the private participants alone. At first, the government officials who took part in the committee work were to share responsibility for the reports, but, as it turned out, they played only a consulting role. Under the original plan officials could have noted their dissent from any views they could not accept, but there is reason to believe that some committees resorted to vague language under which conflicts were hidden.

For example, the Science and Technology Committee, in addition to urging the establishment of a World Oceanographic Organization, recommended for the U.S. itself better "coordination" of its oceanographic programs, which are now scattered among various agencies. A scientist who took part in drafting the report said that only out of deference to the government participants' views did the committee not recommend the establishment of a U.S. oceanographic agency—a proposal popular among some members of Congress but opposed by the administration.

The usefulness of the conference may depend in large measure on the readiness of the administration to initiate venturesome new departures in international cooperation. Some State Department officials are suggesting that President Johnson, whose major successes up to now have been with his domestic programs, may want to shift the principal focus of his attention to foreign affairs. "If this should be true, the conference gives him a pretty big field from which to draw a harvest," one official remarked.—LUTHER J. CARTER

Announcements

The University of Tennessee has established a graduate school of **biomedical sciences**, to be built at Oak Ridge, as part of the university's graduate school. It will be closely associated with Oak Ridge National Laboratory's biology division and will supplement the existing cooperative programs between the university and the laboratory. The first class is to begin work next fall, with 15 to 25 students; a maximum enrollment of 200 is projected. James L. Liverman, associate director of ORNL's biology division, is interim director, until a permanent director is named.

Meeting Notes

A symposium on **electron and laser beam technology** is scheduled for 6–8 April at the University of Michigan, Ann Arbor. It is sponsored by the university and the Institute of Electrical and Electronics Engineers. Papers are invited on physics, applications, new equipment and processes, and holography. Two abstracts: 50 and 500 words; deadline: *15 January*. (G. I. Haddad, Electrical Engineering Department, University of Michigan, Ann Arbor)

Grants, Fellowships, and Awards

Vanderbilt University's medical school offers pre- and postdoctoral research opportunities in the various areas of **anatomy**, in developmental biology, and reproductive physiology. Applicants must have a bachelor's or a master's degree, preferably in the natural sciences, and a B average in their major field. Fellowships are available. Predoctoral stipends are $2400 for the first year, $2600 intermediate years, and $2800 last year, plus tuition. Postdoctoral fellows will receive stipends of $5000 to $6000, depending on experience. All fellowships include $500 allowance for each dependent. There are no deadlines for applications. (J. Davies, Department of Anatomy, Vanderbilt University Medical School, Nashville, Tennessee)

The Fannie and John Hertz Foundation invites nominations for a newly established, $20,000 award in **applied physical science**. Nominees must be U.S. citizens, preferably no more than