continues to be such as activist.

In the United States one of the major blocks to creation of a National Social Science Foundation has been the fear that social science research may have an ideological or partisan taint. Research in the natural sciences may occasionally strike a congressional committee as frivolous, but not as un-American. And there are other hazards. Project Camelot was a kind of social scientists' "Bay of Pigs." In this atmosphere the federal administrator strives for political neutrality.

Young holds known political and social views. As one insider-style newspaper column said last year of him, "He could have been a Labour MP, but chose instead to be a backroom boy, supplying facts and ideas to people too little equipped with either."

But Young seems not to have been the target of much flak from either political or academic quarters. He does admit that "a minor murmuring about a political appointment" has been audible. On the other hand, one civil servant said Young's standing probably bolsters the council's independence.

If Young's public visibility as chairman is higher than an American counterpart's would probably be, the SSRC is certainly no one-man show. The governing council, which may number between 10 and 16, is responsible for making policy and awarding grants, and it has its share of strong-minded members. The council is advised by subject committees organized much like the study sections in research-supporting organizations in the United States.

The SSRC bailiwick is pretty well defined by the names of the original "subject committees"—economics, economic and social statistics (now simply statistics), political science, psychology, social anthropology, and management and industrial relations. In addition there is a separate board to handle educational research, and there is a Committee on the Next Thirty Years, that has interests similar to those of the American Commission on the Year 2000.

The council is less concerned with staying within subject boundaries than with trying to support relevant research which needs to be done. Social and economic history and human geography are now on the eligible list. Projects in criminology and accountancy, for example, could be considered favorably.

A rule the council does stick to is that of not paying the salaries of principal investigators; it pays only the costs of projects, including necessary additional staff. Some critics argue that social science support in Britain has been hampered by the absence of long-term support of major projects. Some suggest that the council should finance permanent SSRC units at universities, on the model of laboratories supported by the Medical Research Council. There are few signs that the SSRC will do this.

The council, however, already contributes to national facilities such as a data bank at the University of Essex. And in the discussion stage are creation of an institute of forecasting studies and a social survey unit on the lines of the Survey Research Center at the University of Michigan.

So far the funds at the disposal of the SSRC have been modest, but they are increasing fairly rapidly. In 1966–67 the SSRC committed £650,000 for research grants, and in 1967–68 it committed £1.4 million for the support of research. For the same years the number of new postgraduate awards rose rapidly, going from 386 in 1966–67 to 535 in 1967–68. Funds for 901 new postgraduate awards are earmarked for 1968–69, and 120 of these awards are for subjects in which no award has been made in previous years. Council funds have been split more or less evenly between support of research and postgraduate awards in recent years, but it is expected that the proportion of the budget going into research will be increased more rapidly in the future.

In awarding research grants the council tries to decide on the merit of projects, regardless of field. There is a very deliberate effort to treat the social sciences as a whole and, in Young's words, to "avoid feudal empires."

Until now this seems to have worked reasonably well. As a new agency the SSRC has had room to maneuver in respect to both budget and policy. But as the boom in the social sciences breeds increased demands for funds for research and training, it will inevitably be harder to satisfy these demands.

—JOHN WALSH

Senator Harris: A Man Concerned about Research, Poverty, Indians

Oklahoma's Fred Harris, 37, has been in the U.S. Senate for little more than 3 years, but already he has achieved a position of visibility and influence surpassing that of many of his more senior colleagues. The latest indication of his political prominence is the 18 April announcement that he would serve as one of the two leaders (the other is Senator Walter F. Mondale) for Hubert Humphrey's presidential campaign. It is apparent that Humphrey feels that Harris' support is worth a lot to his candidacy and, in view of Harris' vitality and shrewdness, Humphrey's judgment is correct.

At the same time that Harris maintains his firm ties with the Johnson-Humphrey wing of the Democratic party, he remains on cordial terms with the other Democratic candidates. Harris says he has "very close friendships" with the other two Democratic candidates—Senators Robert F. Kennedy and Eugene J. McCarthy—and that any of the three could help "knit the country back together again" if elected President.

In recent weeks, Harris has been widely mentioned as a possible Democratic vice-presidential nominee, especially on a ticket led by Kennedy. Not only has Harris been close to Robert Kennedy in his views on domestic issues, but his very different social and geographical origins would nicely complement Kennedy's. Also, in the case of either Kennedy or McCarthy, the choice of an Administration supporter such as Harris would be a welcome gesture of conciliation to that important portion of the Democratic party which

will support Hubert Humphrey's candidacy.

Like his mentor Humphrey, Harris has long seemed a man in a hurry. Married at 19, a father at 20, Harris was elected to the Oklahoma State Senate at 25, the minimum age for membership in that body. When he left the State Senate, after 8 years, he was still its youngest member. In the U.S. Senate today, Harris, at 37, is the second youngest member; only Edward M. Kennedy, 35, is younger.

Mere accession to positions of political prominence does not guarantee political power. This is especially true in the U.S. Senate, where it is assumed that the most junior members will be seen rather than heard, and where power is formally distributed in accordance with length of service. Those who wish to achieve visibility early in their Senate careers must studiously manufacture their opportunities.

Fred Harris has been highly ingenious in manufacturing his opportunities. A prime example of this ingenuity was his creation of the subcommittee on government research during his first months in the Senate. After having requested assignment to the Government Operations Committee in 1965 as a way to learn about a wide range of federal activities, Harris volunteered to do some of the committee's oversight work on research. Harris noted that no Senate committee had government-wide jurisdiction over government-sponsored scientific research. "I saw some gap there," Harris commented in an interview with *Science*. He quickly moved to fill that gap by suggesting to the chairman of the Government Operations Committee that a special subcommittee on research be created. The chairman, John L. McClellan (D-Ark.), agreed. In Congress, the man who suggests the creation of a new committee or subcommittee often gets appointed its chairman, and so it was with Harris.

It is hard for a freshman member of Congress to get any important publicity and consequent influence, but Harris has been able to get an appreciable amount of attention through his research subcommittee, especially in scientific and academic circles. He has held hearings on a wide variety of research-related topics, including recent sessions on the moral and economic implications of human organ transplants and the implantation of artificial organs. He has attained special standing among social scientists for his hearings on, and sponsorship of, a bill to create a National Social Science Foundation. One advantage of such a Foundation, Harris argues, would be to "give the recognition, status, visibility and prestige the social sciences need." Harris' growing familiarity with the social sciences helped prepare him for his role in the study of a great national problem which recently brought him further attention. At the height of last July's urban riots, Harris joined his friend Mondale in suggesting the establishment of a "Special Commission on Civil Strife." Shortly after the proposal had been delivered to the White House, President Johnson phoned to say that such a body would be formed, that it would be called the National Advisory Commission on Civil Disorders, and that Harris would be named one of its members.

Senator Fred R. Harris (D–Okla.): "I really like my life; I like what I'm doing."

At the time this commission of 11 "moderates," headed by Illinois governor Otto Kerner, was set up, there was much speculation that its report would be a bland document in which the views of the white "establishment" would be amply represented. Instead, the report turned out to be a forthright analysis of "white racism" and the ghettos it had helped produce. Although all members of the commission signed the document, Harris is generally credited with having been one of the members who was most forceful in developing a hard-hitting report. One man close to the commission states that Harris placed much emphasis, in the commission's deliberations, on the need to identify white racism as the sickness at the heart of the ills of American society. This same observer, who regards Harris as having been the most influential member of the commission, says that Harris also had a special role in the formulation of the recommendations on the welfare system and on jobs and job training.*

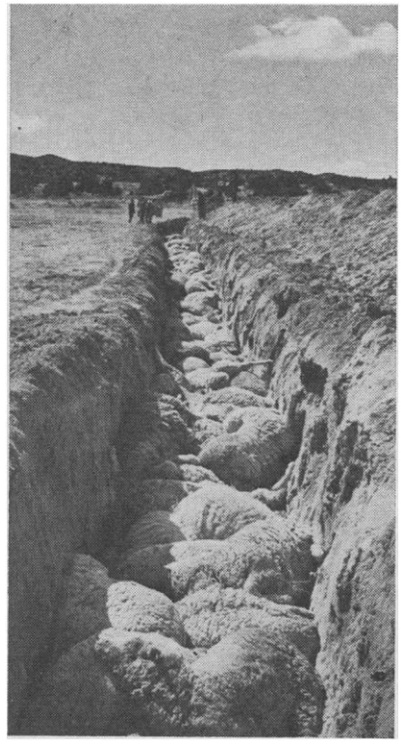
Harris was effective because he always did his homework, kept quiet while other people were talking, and came from a background which lent credence to his remarks: "If Harris could come to feel so strongly about these urban problems, coming from a white rural area, then anyone could, other commission members concluded," this source indicated. Harris was also reported to have had, because of his own economic background, a special feeling for the plight of the urban poor. At one point in the commission's discussion of the investigation of welfare recipients, Harris is reported to have exclaimed, "I've been poor and I can tell you that being poor is punishment enough!"

Harris began life during the Depression, which hit the agricultural Great Plains with special severity. He was the son of a sharecropper who lived near the town of Walters, in southwestern Oklahoma. "I come out of as abject poverty as you can imagine," he cheerfully recounts now, and says that he began working in the fields at the age of 5. A friend from Oklahoma recalls how the whole Harris family "contracted out" as wheat harvesters for many summers, following the harvests from Oklahoma north. During high school Harris began work as a "printer's devil," and later he put in 35 hours a week as a printer at the university press while attending college and law school at the University of Oklahoma at Norman.

Harris married LaDonna Crawford, who is half Comanche, a year after graduation from high school. Harris is said to speak Comanche with a fair degree of proficiency, and his wife says he

*The Commission report is now available for $2 from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. This version is larger with somewhat larger print than the paperback edition published by Bantam Books for $1.25.

Dead Sheep Show Signs of Nerve Gas



A mass grave for some 1200 of the dead sheep in Skull Valley, Utah.

The Public Health Service has identified a compound "identical to" an Army nerve agent in some of the thousands of sheep that died in Utah last month near a test site for chemical and biological weapons (*Science*, 29 March), but as of last week the Army was not quite prepared to accept full responsibility for the deaths of the sheep.

The PHS's National Communicable Disease Center in Atlanta announced in a progress report on 12 April that it had isolated the compound in the liver, blood, and stomach contents of dead sheep and in samples of snow, water, and grass from the affected area. The PHS said the compound was shown by means of gas chromatography, infrared spectroscopy, and mass spectrometry to be "identical to" a sample of the nerve agent that was being tested at the Dugway Proving Ground shortly before the sheep died.

However, on 18 April the Defense Department issued a "status report" asserting that the Army's "findings to date have not been conclusive as to the specific cause for the death of the sheep." The report cited considerable evidence "pointing to Army involvement," but it said there are "many questions still unanswered."

The report acknowledged that the PHS seems to have isolated a compound that is "related to the nerve agent samples," but it pointed out that tests conducted by the U.S. Department of Agriculture "have not confirmed these findings."

The Army said that initially several hundred samples of water, soil, snow, vegetation, and wool were analyzed for traces of nerve agent—all with negative results. More recently, Army scientists have analyzed "very large samples of vegetation" and have concluded it is "possible that traces of a nerve agent or a similar organic compound were present in two extracts of samples." This indicates, the Army acknowledged, "that the agent could be present in an area where sheep died." Further tests on large samples are being conducted by the Army's Edgewood (Maryland) Arsenal and by the PHS.

The Army also said that researchers have been able to reproduce some of the symptoms of the affected sheep by feeding the nerve agent to healthy sheep.

The investigation may continue for a few more weeks, or it might end abruptly, depending on the success of the laboratories involved in pinning down the cause of the sheep deaths. The Army speculates that ultimately the deaths might be attributed to "a combination of factors, of which the [nerve] agent is only one." The Army speculates that the sheep may have become "highly sensitized" to the nerve agent through "some as yet unknown mechanism." Meanwhile, acknowledging that the evidence points strongly to a nerve agent as the cause of the sheep deaths, the Army has proposed that a committee composed of representatives of various federal, state, and private agencies be established to review the existing safety procedures at the Dugway Proving Ground.

—P.M.B.

can do the Indian war dances better than she can. While at Norman, Mrs. Harris worked full time to help support her husband's university studies.

Majoring in political science, Harris was elected to Phi Beta Kappa in his junior year. In law school he led his class each year and was editor of the law review, working meanwhile for the university press and serving as research assistant to the dean of the law school. Not long after graduating from law school in 1954, Harris established his own law firm in Lawton, a city of about 75,000 in southwestern Oklahoma, not far from his birthplace. Before being elected to the State Senate in 1956 he was defeated for the Oklahoma House of Representatives. "His rule has been, if you're defeated for one office, try for the next higher one," one associate comments.

In 1962 Harris lost a bid for the Democratic nomination for governor, but during the campaign he managed to visit every area in the state, and he made a surprisingly strong showing. This statewide exposure proved useful in 1964, when Harris defeated senatorial incumbent J. Howard Edmondson in the primary and went on to polish off his popular Republican opponent, Oklahoma football coach Bud Wilkinson, in the general election, being elected to a special 2-year term. Harris was reelected to the Senate by a sizable margin in 1966.

Most of those who have watched Harris believe he has come along so fast primarily because he works so hard. However, he has other qualities which have helped him politically—a lively sense of humor, a highly developed ability to recall facts and ideas, and a disciplined and highly inquisitive mind.

One associate recalls that he once mentioned Aristotle in a conversation with Harris: "Tell me about Aristotle, he said, and then we were off on an exhausting hour's conversation about Aristotle." After being appointed to the Senate Finance Committee, Harris invited several scholars to give him individual 2-hour tutorials on aspects of foreign trade.

From all accounts, Harris is a voracious and rapid reader. "I read *Science, Scientific American, Foreign Affairs*, and about any popular magazine you can think of. I even read the backs of cereal boxes," he notes. Harris says he averages about three books a week, but only reads "about two novels a year."

If he is ever defeated for the Senate,

Harris says, he would like to spend his time "writing and teaching." He was, reportedly, pleased to have had his name suggested for the presidency of a state university in the Southwest. "I guess all politicians like to lecture," he grinned, "We really are sort of teachers, at heart."

Harris is already writing his own books. He recently finished his "personal view" of his work on the Civil Disorders Commission, which will be published in late May by Harper and Row. Staff members swear that he wrote the book himself on weekends. He is also working on two books which emanate from his subcommittee hearings, one on "health, science, and society" and another on "disadvantage and deprivation." He says that there are several other books he would like to write—one on five outstanding Senators, another on the American Indian, a third on Latin America.

Similarity to Kerr

In political ability and energy, Harris has often been compared to that one-time Senate potentate from Oklahoma, the late Robert Kerr, who brought his state much-needed federal largesse through power on the Public Works and Finance Committees. Harris originally served on Public Works; when appointed to the influential Finance Committee, he had to choose whether to give up Public Works or his seat on the Government Operations Committee, together with his chairmanship of the government research subcommittee. He overruled pressure from some of his Oklahoma supporters who wanted him to keep his seat on Public Works, and kept his seat on the Government Operations Committee.

Harris says he likes his work on the government research subcommittee, and that it has greatly enhanced the "rich education" which he says he has received "at the public expense." He thinks that his subcommittee has had three main impacts in its 2 years of existence:

"First, it has greatly increased attention to the social sciences within the federal government, and has resulted in additional funds.

"Second, there has been a great change within the scientific establishment on the question of equitable distribution of R & D funds around the country. There haven't been many results, but there has been a change in attitude. Now people recognize it as a problem. The spending of R & D funds has an educational impact and an economic one. I don't believe in dismantling existing centers of excellence but, rather, in supplementing them.

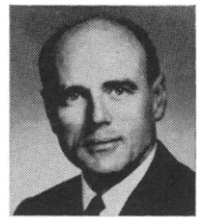
"Third, more and more people are coming to believe in a goals-oriented health policy. They're coming to that position after being reassured that such a policy will not be implemented to the detriment of basic research. A lot of people are concerned that we aren't doing better in health. This change of attitude, however, hasn't brought much change in results yet."

Recently, Harris has begun wondering whether it would not be better to have his government research subcommittee "phase out and die," to be replaced by a joint House-Senate study committee on science and technology, somewhat along the lines of the Joint Economic Committee. Harris emphasizes that he hasn't refined his thinking on these matters but has been asking himself, "Is there any way, without sacrificing the values of our pluralistic scientific system, to bring more coherence into our scientific policy? We don't want the kind of scientific system the Soviet Union has, but we do need more planning, a more goals-oriented policy."

Even though Harris will be spending a portion of his time on research hearings in forthcoming months, it is apparent that his other activities, especially those on the Civil Disorders Commission, where he experienced at first hand the intense anger and hostility of an increasing portion of the residents of city ghettos, have had a much more profound effect on his recent thinking. "I feel very alarmed and depressed about conditions in this country," the usually buoyant Harris says. "What really worries me is the fragmentation of this country into black and white, rich and poor, old and young."

Harris' supporters don't believe that his participation on the civil disorders commission will do him any good politically at present in Oklahoma (which is more than 90 percent white), but Harris thinks the conclusions of the report have to be confronted whatever their immediate political consequences. "Racism is a fact of American life," he said quietly; "it is an ugly fact but we have to see it to deal with it." Even more impressive than Fred Harris' other important attributes is his capacity to face the grimmest aspects of our national life squarely while retaining the determination to do something to change that reality.—BRYCE NELSON

APPOINTMENTS



Robert B. Mautz

H. Burr Steinbach

Robert B. Mautz, vice president for academic affairs, University of Florida, to chancellor of the Florida University system. . . . **H. Burr Steinbach**, chairman of the department of zoology, University of Chicago and director and president of the Marine Biological Laboratory, Woods Hole Oceanographic Institution, on leave as dean of graduate studies, Woods Hole. . . . **John Summerskill**, president of San Francisco State College has resigned. . . . **Patrick J. Friel**, director of the Office of Ballistic Missile Defense, Advanced Research Projects Agency, to deputy assistant secretary of the Army, and director of the newly established Advanced Ballistic Missile Defense Agency, which will combine some elements of the Advanced Research Projects Agency, Office of Ballistic Missile Defense and the on-going NIKE-X advanced development. . . . **Edward D. Jordan**, head of the division of nuclear engineering, Catholic University, to director of the newly established Office of Institutional Research and Planning at the university. . . . **Harriott O. Kunkel**, acting dean and director of the Texas Agricultural Experiment Station, to an additional post as dean of agriculture, Texas A&M University. . . . **Peter Dehlinger**, head of the geophysics program, ocean science and technology group of the Office of Naval Research, to director of the newly established Institute of Marine Sciences, University of Connecticut. . . . **Floyd L. Thompson**, director of Langley Research Center, NASA, to special assistant to **James E. Webb**, administrator of NASA. He will be succeeded by **Edgar N. Cortright**, deputy associate administrator for manned space flight, NASA headquarters. . . . **W. Peter Crowcroft**, director, South Australian Museum, to director of the Chicago Zoological Park. . . . **Aaron Ganz**, training grants and fellowships officer, NIH, to chief of the program planning office, National Institute of Dental Research.