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## Survey Shows Freshmen Shift on Careers, Values

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An annual survey of entering college freshmen shows that this year's frosh are distinctly cool to careers in scientific research. Scores on what might be called the greed and power index, however, are up and rising.

Perhaps the most striking statistics in the survey are those that indicate a continuing decline in interest in elementary and secondary school teaching. The news that only 4.7 percent of the freshmen this year aspire to teaching careers compared to 21.7 percent in 1966 is stark enough. But UCLA professor Alexander Astin, who is director of the study, observes also that since standardized tests show that "Education majors have much weaker academic skills than students majoring in most other fields, it appears that we are headed for a crisis not only in the quantity but also in the quality of persons who want to teach in our elementary and secondary schools."

Scientific research was made a career choice by 3.5 percent of freshmen in 1966 when the surveys began. This year, only 1.5 percent chose it.

In contrast, categories that have recorded remarkable rises in drawing power in recent years include engineering—from 4.7 percent in 1974 to 12 percent in 1982—and computer programmer/analyst—from 2.9 percent in 1977 to 8.8 percent in 1982.

The survey is conducted by UCLA and the American Council on Education. In addition to collecting a variety of biographical, demographic, and financial data from the sample of 188,692 questionnaires from 350 institutions, the survey also assesses student academic interests, motivations, and attitudes on political and social issues.

Astin sees the waning enthusiasm for careers in scientific research as fitting a pattern in a group of occupations which are "all losing people." All are low paying, require graduate study, and provide "human services." The group includes nursing, social work, and the clergy as well as education and scientific research.

To a question on "objectives to be considered essential or very important," the top scoring option at 73.1

percent was "to be very well off financially." Similarly on the rise in recent years have been desires for personal authority and recognition. Sliding downward are scores on attitudes reflective of the altruism in favor in the 1960's.

Astin notes that the decline in "altruism and humanism" is not as great as the rise in the desire for money and power. The reason? The survey shows that women in recent years have "adopted a lot of stereotypic attitudes" associated with men. Women were formerly less concerned with money and influence. The gap has narrowed so the greed and power quotient is up.—**JOHN WALSH**

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## USDA Seeks More Basic Biological Research

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In its plans for research at the Department of Agriculture (USDA) this year, the Administration has shown a fresh determination to shift the emphasis away from traditional programs and onto new basic research projects. Many outside reviews have recommended such a change, including most recently the Winrock Conference report, sponsored by the Rockefeller Foundation and the White House Office of Science and Technology Policy (*Science*, 24 September, p. 1227). In the 1984 budget, new funds are to be channeled into competitive grants for genetic engineering studies, while less will be sought for "special grants," which are controlled by the traditional agriculture research network.

Total spending on USDA research in the 1984 budget drops from \$709 to \$706 million, not a severe loss, but enough to meet Secretary John Block's dictum that all major divisions of USDA have to sacrifice this year. The largest reduction, \$17.9 million, is made in the special grants category. Part of this includes a \$5.7-million item that USDA has been trying to eliminate for several years running, known as Section 1433 funding for animal disease research. It is earmarked exclusively for colleges of veterinary medicine and experiment stations. Because the money must be parceled out to so many eligible schools, USDA argues, the grants are

too small to do much good. Although USDA has tried to eliminate the program before, the funds have been restored at the insistence of Senator John Melcher (D-Mont.), a former veterinarian who takes up the cudgels for his old profession. It may happen again this year.

The USDA hopes to counter this pressure by pointing out that the budget has new funding for animal genetic research in the competitive grants area—\$4.5 million worth. In previous years, competitive grants have been awarded only for nutrition and plant research, so this budget marks a new departure. Unlike other categories of research, these projects are proposed by the scientists who want to do the research, and are funded on the basis of merit, as judged by committees of peers.

The USDA also plans to increase funding for the Agriculture Research Service, the in-house program, by \$10 million. Most of this, \$6.9 million, will go to meet pay increases for federal employees. The remainder is for basic research, including animal genetic engineering.

No change is planned for the land-grant cooperative program, which remains at \$184 million. Thus, formula grants to state colleges will be hurt by inflation and reduced state appropriations but not by federal miserliness. According to one USDA budget official, the state schools have already made known their dissatisfaction through congressional staff. More lobbying is anticipated.

—**ELIOT MARSHALL**

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## Congress Raises Ante on Science Education

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Inclusion in the President's budget of a \$75-million initiative to bolster science and mathematics instruction seems to settle the argument over whether the federal government should play a direct role in combating the so-called crisis in science and math education in the schools. What remains very much in dispute, however, is the proper level of funding.

The main item in the Administration proposal is a \$50-million scholarship program for prospective science and math teachers to be administered by