

cept was floated in President Reagan's 1987 State of the Union message as part of his economic competitiveness initiative. The foundation had aimed at launching the first centers in the 1988 budget, but Congress declined to provide special funding for them and the overall budget increase of about 6% last year was too small to stretch to financing the centers. Startup of the centers program was, therefore, postponed to the current budget year.

NSF's statement announcing the selections says the centers are being established to "promote basic research that can most effectively be accomplished through centers—complex research problems that are large scale, of long duration, and that may require special facilities or collaborative relationships."

NSF's increasing support for centers and group research has roused anxiety among some academic scientists who see the trend as posing a threat to the foundation's traditional sponsorship of research grants for individual investigators. NSF director Bloch has persistently championed the new centers, but has insisted that a balance will be maintained between the two modes of research support (*Science*, 3 April 1987, p. 18).

Commenting on the 11 centers chosen, Bloch said that "People will see if they look objectively at the topics and at the people who are participating that it is an outstanding set of research topics that could not have been done in any other way but through the centers approach."

The new centers are modeled on the existing NSF engineering research centers established to promote research and education in engineering through interdisciplinary projects and links with industry. Like the engineering centers, the science and technology centers are intended to foster transfer of basic research results for industrial application, but the science and technology centers do not require formal participation by industry as the engineering centers do.

Establishment of a total of 25 engineering research centers were projected when the program was begun in the early 1980s, but so far 18 are in existence.

In discussing the possible total number of science and technology centers that might be established over the years, Bloch says that in the past he has "thrown out a number like a hundred." He acknowledges that this was "optimistic" and says that NSF has not set any total number of centers as a goal.

Asked to comment on the postponement of funding for the science and technology centers program and a reduction in funds below the sum originally requested, Bloch said the establishment of 11 centers represents "a solid start we can all live with." ■ JOHN WALSH

A Tiff Over Titles at Stanford

What is a professor? Where do they come from? And how do you make more of them? A squabble at Stanford University over the right of think tanks, policy shops, and multidisciplinary institutes to make their own professorial appointments has led to the resignation of Sidney Drell as co-director of the Stanford Center for International Security and Arms Control.

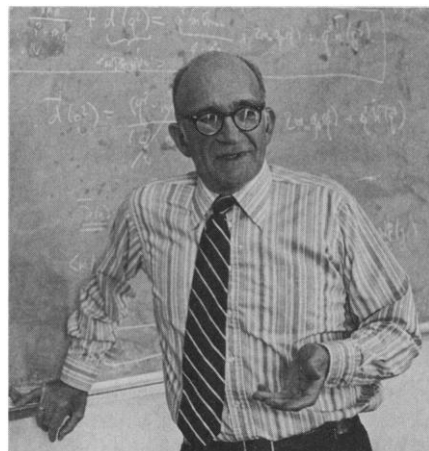
The departure of Drell, an internationally recognized force in high energy physics and arms control, is both a serious blow to the technical component of the arms control center, as well as the most recent flare-up in a long-running debate over who has the power to make academic appointments at universities.

Drell says he resigned in frustration after realizing that he could not retain bright, young scholars at the center because of Stanford's insistence that faculty appointments

be made through departments. This rule applies not only to faculty on the tenure track—whom the university may have to feed for life—but also for what Stanford calls "parenthetical" professors, meaning those with adjunct appointments.

As it stands now, a director of a center at Stanford must go "hat in hand" to convince one of the academic departments to make an appointment that would benefit both the center and the department. Drell says the present system creates "insurmountable barriers" for many institutes, particularly those trying to attract people who do not fit easily into departmental cubbyholes.

It is one thing to convince the economics department to make an appointment at Stanford's Center for Economic



Drell: Frustrated by barriers.

Policy Research, while it is quite another to find a home for someone examining the political, moral, or technical aspects of nuclear war. Drell contends that "a lot of creative thinking in multidisciplinary, policy-oriented areas does not have a welcome home in the departments."

The various centers and institutes at Stanford can hire their own people, but the best they can offer is a position with a title such as "senior research fellow." Without the word "professor" appearing somewhere in the title, a scholar at Stanford lacks status, and more importantly, clout. Without a faculty position, most researchers cannot call themselves a principal investigator, meaning they cannot apply for their own grants. Nor can they teach without sponsorship from someone on the faculty, or have much to say when it comes to building a program.

"It is a highly limited position. . . . You are a citizen without rights," says Ted Postol, a senior research associate at the arms control center and a protégé of Drell's who is currently considering offers to go elsewhere. Astronaut and physicist Sally Ride is also talking about leaving the arms control center for another post, perhaps one at Stanford.

The current system, though, does have its defenders. James Rosse, provost of Stanford, believes that the university is best served by keeping faculty appointments firmly rooted in the academic departments. Rosse says there is concern that policy-centers such as the Hoover Institution attract experts in areas that may only be of passing interest, yet faculty appointments are tough to undo. "If you're going to do policy-oriented work, you've got to face the fact that the topics that are receiving attention today will change," says Rosse.

Drell agrees with Rosse that academic standards must be maintained, but insists that centers can fill the bill by forming selection committees, by doing a national search, and by having the appointments approved by the provost and a counsel of elders. Drell points to other universities such as Princeton, Harvard, and Michigan that have learned to accommodate policy centers by allowing them to make their own appointments. Drell will continue as deputy director of the Stanford Linear Accelerator Center.

■ WILLIAM BOOTH