of scientific manpower should be made away from research activities and into efforts to use the results of science in productive technology. "To withdraw from the line of advance in basic science now," says the council, "is, we believe, to accept the future position of an economic and technological satellite."

A main concern of the council is long-range planning. Much of its energy has gone into studies designed to inform such planning efforts, and here the council seems not to be whistling in the dark. The report announces fund allocations for the research councils for 1967–68 and the following 2 years. These budgets are provisional since Parliament must provide funds with annual votes, but the figures in these "forward programs" are firmer than similar projections would be in the United States. The appropriations process in the United States is based on an annual confrontation between the agency and Congress which assures budgetary uncertainty. In Britain, the cabinet system of government means that the majority party controls both legislature and executive and that proposal of a budget virtually guarantees acceptance by Parliament.

The portion of the civil science budget in the council's province will rise from £72.6 million in the current year to £87 million in 1969–70. This represents increases of 11 percent this year and 10 percent and 9 percent in the succeeding 2 years. How the growth rates were established is a matter on which the report is entirely vague.

The council does complain that in recent years the rate of spending on civil science in Britain has increased at a slower rate than in the United States, but on present form, the planned British rate for the 3 years would compare favorably if the United States curve continues on its recently flattened course.

The major "big science" decision facing the British is on participation in construction of the proposed European 300-Bev proton synchrotron. The council report carries a recommendation that Britain join other members of the European Organization for Nuclear Research (CERN) in the project, but the recommendation is not made by the council as such but by a working group headed by M. M. Swann, principal of the University of Edinburgh. The working group's advice is heavy with qualifications. Britain should only participate, the group recommends, if guarantees are obtained against escalation of costs in building and operating the big accelerator and only if there are assurances that additional resources are available from the British government for proper development of other fields of science.

Participation in the building of the 300-Bev machine and other CERN projects would increase U.K. spending on nuclear physics—national and international programs—from a present level of about £18 million a year to £34 million in 1977, a rate of increase of 7 percent a year.

Nuclear physics now absorbs more than 40 percent of the Science Research Council's £34-million annual budget, and, since the Science Policy Council wishes to see the proportion of funds available for other scientific fields increase at a faster rate than funds for nuclear physics, the council seems to be asking the government to consider the decision on the accelerator as part of a science policy package deal covering the next decade.

The council would like to see even longer term planning of science. The report points out that where costly capital developments are involved—often in the "Big Science" sector—a lack of planning latitude causes unnecessary delays and "underspending."

The British verdict on the big machine is expected soon since CERN is scheduled to reach a conclusion on the project before the end of the year. University partisans of British participation have been fairly sanguine recently, but the matter is now being deliberated at the upper levels of government from which no progress reports emanate. The council acknowledges in its report that the decision depends ultimately on political and economic factors. And the state of the British economy has been having a dampening effect on expansionary policy in education and science. But the 300-Bev machine is the most expensive and conspicuous issue in science policy to have risen in Britain outside the realm of defense. It has acquired significance not only as a symbol of Britain's intentions, both scientific and "European," but also as a test of the science advisory apparatus that has been hopefully constructed over the past several years.—JOHN WALSH

Dow Chemical Company: Sales and Worries Are Up

New York. By all conventional measures, the Dow Chemical Company is prospering. Its sales are climbing steadily and will soon pass an annual rate of $1.4 billion. Yet its image is suffering. Next to LBJ, Dean Rusk, and Hubert Humphrey, Dow, the manufacturer of napalm, has become the most popular target for campus antiwar protests.

Clearly, Dow does not like its new role one bit. "We cannot evaluate accurately how much these general efforts to tarnish our good name have hurt us. But we know that they have and will hurt us and have the potential to hurt us greatly," Carl A. Gerstacker, Dow's chairman of the board, said in a recent statement.

So far, however, the bad publicity seems not to have affected profits. Company officials have not been able to detect any sales falloffs from the demonstrations, despite some scattered attempts to boycott Dow products. Even a successful consumer boycott would not necessarily cripple the company; only 8 percent of total sales come from consumer products (the most famous is Saran Wrap) and packaging.

The company's recruiting campaign may be more vulnerable, but damage from the demonstrations still seems to be superficial. As of 13 November, the company had visited 153 schools; at 27 there were demonstrations. But not all the demonstrations were disruptive, and not all the disruptive demonstrations prevented Dow officials from seeing job candidates. At Harvard, for example, the company representative was trapped in the chemistry building for an afternoon, but he had been scheduled to talk with fewer than ten students and had seen all but one of them in the morning.

The very prospect of trouble has led

a number of schools to ban the company from campus or, at least, to postpone the planned interviews. No less than five universities have reacted in this way, but Dow officials believe that visits will be rescheduled at some of them. As far as numbers are concerned, Dow is running campus interviews at about the same rate as last year, when 11,000 were held and 1300 new employees—more than half of whom came directly from universities—were hired.

Quality, not quantity, is what worries some company officials. There are no signs yet that the caliber of job candidates is dropping; but nevertheless Raymon F. Rolf, Director of Corporate Recruiting, explains, "you just don't know what it's [the demonstrations and the publicity] doing to the quality of students we're talking to." Dow's biggest needs are for chemists and mechanical and chemical engineers, and competition for new people in these fields is fierce. Rolf points out, however, that not everyone has to be a prospective Nobel laureate; a strong engineering candidate, he says, might have a C+ average and be a "good, husling, clean-cut guy who wants to go out and do a job."

Despite the absence of tangible evidence that the antiwar protests have hurt the company materially, Dow is acting as though its stock had just dropped 20 points. It is not panicking, but it is making a concerted effort to explain itself and dispel the image of a "soulless" company. It has carefully prepared a public relations kit for newspapers in cities where demonstrations might occur, and Dow officials have consistently sought to be open about the problem.

What clearly bothers Dow is that things may get worse before they get better. Recently in St. Louis, for example, a group of housewives demonstrated against the company by publicly burning packages of Saran Wrap. The impact of these events may be small on a $1.4-billion business enterprise, but not on the men who run it. Having formed company policy, Dow's executives now bear the onus of standing up in public for their position. That job, by all indications, is growing increasingly time-consuming and increasingly irritating.

Though individual recruiters are warned against debating with demonstrators, Dow sent the head of its industrial relations department from Midland, Michigan (company headquarters), to Cambridge, Massachusetts, to participate in a panel discussion at M.I.T.; the discussion is credited with having helped to avert a disruptive demonstration there. Dow has constantly stressed the smallness of the napalm contract—less than ½ of 1 percent of total earnings—and the company's commitment to principle: support of a determined national policy. The company's directors also discussed napalm at length last spring. More than ever, "morality" is becoming a corporate anxiety.—ROBERT J. SAMUELSON

Academic Research: Foster Defends DoD Support in Universities

Against a background of increasing opposition toward military-supported research in academic institutions, the Department of Defense has undertaken a review of its activities in the nation's institutions of higher learning. One consequence of that review was a decision to discontinue the support of classified basic research in universities (Science, *10 November, News in Brief). The rationale for this decision and the Department's general policies toward its university relations have now been spelled out in detail by John S. Foster, Jr., director of Defense Research and Engineering, in a statement made on 2 November, titled "On the Relationship between the University and the Department of Defense." The complete text follows.*

For more than twenty-five years there has been a productive, vital relationship between the Department of Defense and the academic research community. This relationship has both contributed to and benefited from the development of our superb national scientific and technological base. Yet from time to time, there are some who question this relationship. Some maintain that universities should not accept research support from the DoD; they argue that DoD research cannot be consistent with the spirit and goals of the academic world. Some argue that the DoD has, or is gaining, an undesirably predominant position in supporting university research.

We are concerned about these issues, and sympathetic to the interests involved. But there is misunderstanding of our goals and policies as well as past and current trends.

First I should state briefly the reasons for DoD needs for research. Next we should examine our basis for believing that defense and academic research objectives are compatible. We then should review funding data comparing the DoD position with other Federal agencies as sponsors of university research. Finally we should discuss the issues related to security classification and reviews of publications.

DoD Research Responsibilities

National security depends critically upon first-rank science and technology. From a technical perspective, DoD must assure that the pool of knowledge and understanding on which we draw to maintain our security, grows as fast as new understanding and new opportunities permit. We cannot afford to lag behind any nation in any important area of science and engineering. Thus the DoD must provide its share of support to enable talented scientists and engineers to push the frontiers of what is known and what can be achieved in practice. Research to support our future national security is consistent with Einstein's injunction: "The concern for man and his destiny must always be the chief interest of all technical effort. Never forget it among your diagrams and equations."

In addition, the Federal Government, through the DoD, must insure that this