been initiated to deal with the "physical infrastructure problem." The board took a broad view of the problem. Academic science infrastructure, it said, means "Construction of new and renovation of existing facilities—understood to include buildings and research platforms of various kinds, such as ships, field stations, etc.—and provision of the personnel required to operate and maintain those facilities."

The whole subject is now under review by an NSF-led ad hoc Interagency Committee on Academic Research Facilities, made up of representatives from the NIH and departments of Agriculture, Defense and Energy. Though the committee's report is due by next February, Schmitt, who is vice president of research at General Electric and unaccustomed to waiting for answers to most questions, asked Erich Bloch, who has recently been appointed as director of NSF after serving as an IBM vice president, but has not yet been confirmed by the Senate (PHYSICS TODAY, July, page 59), to report to the board in August on the proposed pilot program. The board made it clear that the "entire process" that would put NSF back into the business of funding a building boom on campuses would be subject to peer review. As Schmitt put it to his NSB colleagues: "If you go out to the universities and kick the tires, you are sure to hit the soft spots." —IG

At UNESCO politics and science don't mix

The Reagan administration's threat to pull out of UNESCO at the end of this year dismays many US scientists who have worked closely with the organization. Criticism has been voiced on Capitol Hill, where two committees of the House of Representatives have held joint hearings on the issue once a month since March, and in other forums, such as the lively session at the May meeting of the American Association for the Advancement of Science. Even members of the White House Science Council, which provides advice to the President's chief scientist, George A. Keyworth II, expressed their opposition and recommended that the government reconsider its proposed action or, at the least, postpone withdrawing for a year, until a better assessment could be made of the risks and benefits of staying in UNESCO or abandoning it.

"Withdrawal from UNESCO will deal a serious blow to some American science," Arthur K. Solomon, emeritus professor of biophysics at Harvard and a scientific member of the US delegation to UNESCO in 1976 and 1978, told Congress at its first hearing on the agency. "American science needs the international network provided by UNESCO, especially oceanography, climatology and the earth sciences. UNESCO is the nexus of multilateral cooperation in global scientific programs . . . International science has long recognized that if there were no UNESCO, one would have to be created."

Last December, when the State Department publicly announced the US decision to withdraw from the United Nations Educational Scientific and Cultural Organization, it rested its case on political and financial grounds. The agency, said Gregory J. Newell, assistant secretary of State for international organization affairs, has "extraneously politicized virtually every subject it deals with" and "exhibited hostility toward the basic institutions of a free society, especially a free market and a free press, and . . . demonstrated unrestrained budgetary expansion." In delivering this characterization, the State Department largely ignored a report by a Federal interagency panel, led by the National Science Foundation, which concluded that the scientific benefits the US derives from UNESCO "clearly warrant our continued participation."

Academy fear. The State Department also appeared to pay little heed to a National Academy of Sciences review that found science to be UNESCO's "most succcessful effort." In his cover letter to Newell, the Academy's foreign secretary, Walter A. Rosenblith, a biophysicist at MIT, expressed the worry that "there is much criticism leveled at UNESCO programs, structure and management, but in the area of sciences at least, there is no real alternative to UNESCO at the present time."

UNESCO has a remarkable record of achievements. The organization did pathbreaking work in reducing functional illiteracy in many Third World countries and in salvaging such cultural treasures as Venice, the Acropolis and Abu Simbel. It organized and coordinated the International Geophysical Year of 1957–1958, helped originate and support the International Centre for Theoretical Physics at Trieste and laid the foundation for European particle physicists to build CERN. UNESCO also pioneered solar-energy research in the 1950s, and enabled scientists in such historically hostile nations as Greece and Turkey to collaborate on earthquake studies.

Accordingly, just before Congressional hearings began, the State Department amended its view in a policy review that awarded UNESCO high marks for several scientific programs. Among those considered praiseworthy were: the International Brain Research Organization, which advances neurobiology, the Intergovernmental Oceanographic Commission, providing US scientists with marine data on foreign sites that would be difficult or impossible to obtain otherwise, and Man in the Biosphere, involving 105 nations in studying and managing the world's major ecosystems. In the case of the Man in the Biosphere program, Paul T. Baker of Pennsylvania State University told congressmen last March, not only is there no plan to participate if the US left UNESCO, but no US funds are earmarked for continuing MAB beyond 30 September. Clearly, said William A. Nierenberg (Scripps Institution of Oceanography) at the same hearing, the survival of MAB and the International Geological Correlation Program would be in jeopardy without UNESCO. By contrast, such organizations as the International Oceanographic Commission and the International Union of Pure and Applied Physics do not require UNESCO affiliation for membership. Consequently, Nierenberg observed, in evaluating the benefits of US participation in UNESCO scientific programs it is necessary to distinguish between observational sciences that rely on geographical access and experimental or theoretical science that do not.

Last April a staff study for the House Committee on Foreign Affairs was critical of the State Department for neglecting to see the critical implications of "abandoning US leadership in UNESCO." The House staff report urged withholding final judgment on leaving the organization until Congress's Government Accounting Office completed an investigation of UNESCO that Congress had requested. The GAO report, concentrating mainly on the tangled and comparatively imperfect financial and management practices of UNESCO, is due for release in September.

Spreading wariness. The US is not alone in its dissatisfaction with UNESCO. In March, 23 other countries, including Britain, West Germany, Canada and Japan, served notice that they would consider leaving unless there were substantial changes in the organization's financial management, personnel practices, program development and political policies. Even the Soviet Union has since demanded reforms, without providing specifics, while significantly omitting for the first time its customary support of UNESCO Director General Amadou-Mahtar M'Bow, a longtime teacher, education official and Minister of Education and Culture in Senegal before and after its independence from France.

In a recent study of UNESCO, "An Idea and Its Servants," Richard Hoggart, a

UNESCO D. ROGER

UNESCO Director General M'Bow, at his desk in the secretariat headquarters in Paris, is at the center of a political and managerial controversy with the US and other western nations.

British sociologist who served as the agency's assistant general director from 1970 to 1977, argues that it was always a political battleground, though the conflicts have become greater and fiercer as UNESCO grew from the original 27 member nations that formed it in 1946 to today's 161. Under the rubric of "one country, one vote," the US was often outvoted in the past two decades—since the great influx of Third World states—especially on issues of human rights, education of refugees and a doctrine called the New World Information Order, which proposed to justify state control of news and journalists, ostensibly to address Third World grievances about distortions of events within their borders in Western press reports. At UNESCO's general conference last year, representatives of the member countries voted down a resolution to adopt the New World Information Order, though they adopted 132 out of 134 resolutions put forward largely by the secretariat to promote its own agenda of policies and programs without so much as a vote.

Along with this politicization of UNESCO came a bloated bureaucracy, which now numbers about 2300 employees at its headquarters in Paris and some 500 in the field. To Harry Lustig, provost at City College of New York and a former senior professional in technological education at UNESCO from 1970 to 1972, "the layers of people, many of them loyal only to those who control patronage, meaning M'Bow, have eroded the original ideal and goals of the organization." Lustig and others have argued that UNESCO officials often expect the staff to behave like scientists or cultural experts when they are simply administrators at best and all too frequently make judgments about programs without benefit of informed external advice. The NSF survey acknowledged in its list of UNESCO imperfections that the quality of scientific and technical staff recruited from Third World countries is often poor. It suggested that the US is at least partly to blame for UNESCO's administrative problems. The absence of a central US body to coordinate academic and government participation has made it difficult to persuade leading scientists and others to join UNESCO projects, let alone exert leadership roles. Today, fewer than 40 US citizens work for UNESCO, and, according to the House staff study, the State Department doesn't actively recruit qualified Americans to serve the UNESCO secretariat or field programs. "We haven't taken UNESCO seriously in recent years," says Lustig. "Our neglect cannot be diagnosed as benign. It's critical."

Budget busting. Still, as US interest in UNESCO dwindled, its contributions to it mounted. The US pays 25% of UNESCO's current budget of $347.4 million for the 1984–85 biennium—or $86.2 million for the two years. In turn, UNESCO funds about one-third of the International Council of Scientific Unions, a nongovernmental body organized in 1931 and representing science academies in 20 countries and other scientific societies, including the International Union of Pure and Applied Physics. To turn aside some of the assaults by scientists of Western countries, M'Bow has increased the annual grant to ICSU by one quarter to $500 000. In the past, ICSU provided most of IUPAP's $100 000 annual budget, but in recent years ICSU has cut back its subventions, especially as representatives from Third World countries sought to lessen US presence and influence in international science groups.

"If we pull out of UNESCO," says D. Allan Bromley of Yale and a member of the White House Science Council, "it would give those who would limit or minimize our participation in IUPAP and other scientific bodies more ammunition to do battle." By staying in UNESCO, he observed, the US can continue to fight for the free circulation of scientists—that is, the prospect of obtaining visas to attend conferences and conduct research away from their own countries, as well as, in some instances, the freedom of scientific inquiry within their own countries. As president of IUPAP and and a past member of the executive board of ISCU, Bromley finds this issue to be of greater importance to US and world science than the organization's financial and management troubles. "The United States could contribute directly to ISCU if it left UNESCO," he points out, "but it would no longer be seen as contributing to the free and open exchange of science in the world. That openness has been one of our great contributions to world science. It would be a tragedy if that were lost." —IG

Tigner named to direct R&D program for SSC

Although the Department of Energy has not reached an official decision about including the proposed Superconducting Super Collider in its budget request for fiscal 1986, there are signs that it is going forward with the world's largest particle accelerator. It has approved the choice of Maury Tigner of Cornell to direct the R&D program for designing the behemoth machine. The selection of Tigner was announced 20 June by H. Guyford Stever, president of Universities Research Association, which was designated by DOE last March to administer the SSC venture. While URA also manages Fermilab, DOE made it clear that responsibility for SSC would be completely separate. To make sure of this, URA established an SSC board of overseers, with Boyce D. McDaniel, director of Cornell's Newman Laboratory of Nuclear Studies, as chairman.

DOE officials consider Tigner ideal as chief designer of the SSC. He headed some 150 physicists and engineers from more than a dozen national labs and universities in preparing a 441-page SSC reference design study, which went to DOE on 8 May (PHYSICS TODAY, June, page 17). He has championed the SSC before scientific groups and congressional committees. Representative William Carney of New York remarked after one hearing that "Tigner is one of the most informed and imperturbable witnesses I've seen on Capitol Hill."

Tigner's new job has at least two purposes: to maintain the head of steam among accelerator architects that drove the reference design study to completion in three months, and to organize a central working party to develop a single national design for the SSC, thereby preventing a shoot-out among different groups, each claiming the best plan. —IG