

panies, visited the White House to talk with presidential aides. The toxic substances legislation then beginning to emerge in the Senate and House was reportedly described as a threat to sales, profits, jobs, and innovation.

A few weeks later, James T. Lynn, director of the Office of Management and Budget, disclosed—in a letter to a Republican congressman who had taken issue with the Administration's support of premarket notification and screening—a major change in the Administration's position. He said that it was now felt that to require the industry to give premarket notification of new chemicals might be

“overly burdensome.” What the Administration now favored was for Congress to do just as the industry had long been recommending in its testimony on toxic substances bills—limit premarket notification to a list of suspect chemicals which EPA would prepare.

Since then, the Administration has clung to this position through thick and thin, even going so far as to oppose the toxic substances bill that was passed by the House with the blessings of the Manufacturing Chemists Association. But the odds now seem better than even that, in the end, President Ford will sign the toxic substances bill.

Russell E. Train, EPA administrator, certainly will be urging him not to veto it. And some of the President's shrewder political counselors are likely to be giving him similar advice, for his vetoing of a measure designed to help combat the scourge of cancer could give Jimmy Carter a potent issue. It would not be surprising if, sometime in the next few weeks, a carefully staged bill-signing ceremony takes place in the Oval Office, with the President, surrounded by environmental and industry lobbyists, declaring that a bold new step is being taken to protect the public health and the environment.

—LUTHER J. CARTER

## Biological Curriculum Study Group: A \$1.2-Million Misunderstanding

The Biological Sciences Curriculum Study (BSCS), one of the early school curriculum revision groups and, on several counts, the most successful, is embroiled in a financial dispute with its federal patron. At issue is a \$1.2 million claim by the National Science Foundation (NSF) involving the high school biology course for which BSCS is best known. The matter is now under study by the General Accounting Office (GAO) and could end in litigation. If BSCS were ultimately required to pay the entire amount of the claim, it would probably mean the finish of the organization, at least in its present form.

The dispute centers on royalties derived from textbook sales, but the issues are complex; BSCS insists that on the main items in the claim it acted properly and with NSF approval. First raised during an NSF internal audit in 1974, the questions posed by the auditors could not be immediately resolved and now have the attention not only of BSCS, NSF, and GAO, but also the House Committee on Science and Technology, the authorizing committee for NSF. Also implicated, at least formally, is the University of Colorado, which served as BSCS's parent organization and official NSF grantee until BSCS set up as an independent, nonprofit organization in 1972.

A crucial stage in the affair was reached in March, when the Science and

Technology Committee directed NSF to cut off funding to BSCS until the claim was satisfactorily dealt with. The embargo on funds was a serious blow to BSCS, since it would mean suspension of work on a Human Sciences Program (HSP)—a major, multidisciplinary science program for sixth, seventh, and eighth graders, which BSCS has been developing with NSF funds. After about 3 months of negotiation, an agreement was reached by BSCS, NSF, GAO, and the university, under which BSCS created an escrow account and pledged property, existing funds, and future royalty income sufficient to satisfy the claim in full should it ultimately be found valid. The committee then voted to lift the embargo on funding, thus permitting work on HSP to continue.

GAO, the congressional financial watchdog agency, is in the process of examining the claim. In the case of claims by government agencies against outside organizations, GAO findings are binding on the agency. If the claim (or parts of it) is found invalid by GAO, it will be dropped. If the claim is found valid, the Justice Department will presumably take court action to recover the money.

Committee attention was drawn to the matter last November by a letter in which NSF director H. Guyford Stever noted that NSF was, so to speak, turning the matter of the claim over to GAO. The embargo seems to have been triggered in

March, however, by a letter written immediately before the committee's final meeting on the NSF authorization bill and directed to the committee by Representative John B. Conlan (R-Ariz.). Conlan, a conservative Republican who for the past year and a half has kept the NSF education directorate on the defensive about its curriculum development program, urged that funds for the HSP and another curriculum project about which management questions had been raised, be diverted to other uses. The committee, however, opted for the temporary embargo on funds, for it was also concerned about protecting the government's investment in HSP, which through this summer amounted to \$2.3 million. Some 5½ years of development and testing on HSP will be completed this month and another 2 to 3 years and \$1.6 million will be required to finish the project.

The principal claim in dispute involves \$800,000 in textbook royalties. At issue is not the royalties themselves, but payments by the publishers of the three versions of the high school biology curriculum to BSCS. The difficulties arose as a result of negotiations to revise the BSCS first edition in the late 1960's. The three publishers had each paid a royalty rate of 15 percent, unusually high for a textbook. The publishers had agreed to the royalty because NSF had paid development expenses and because of their expectation—which proved to be right—that the curriculum would be a commercial success. (Nearly 4.5 million copies of the three versions have been sold to date, and an estimated half of all high school biology students use the BSCS material.)

The publishers were not, however, willing to pay the premium rate for a second edition mainly because they have lost

“exclusivity” since other publishers are free to adapt the federally funded BSCS material. This was in 1968, when BSCS was addressing the question of whether it should cease operations, because the high school biology course was complete, or continue with future revisions of the course and with other projects. The decision was to carry on. Developing in new directions meant finding ways to be less dependent on NSF, and this was difficult with no royalty income.

The device struck in the negotiations was for the publishers to provide “grants”—fixed dollar amounts not tied to sales. The final agreement, to which NSF officials gave formal agreement, provided that NSF would receive 8 percent royalties on the second edition—said to be on the high side for normal commercial rates—and BSCS would get grants totaling \$800,000, the sum now in dispute. The publishers apparently were agreeable to the arrangement because it assured them of someone to prepare the third edition, which BSCS proceeded to do. It was the grants with which the auditors took issue in 1974, arguing that they were a form of royalty and should be remitted to the government.

The grants assisted BSCS in its transition to a permanent and ultimately independent status. In 1972 BSCS formally separated itself from the university and became a nonprofit educational organization, with William V. Mayer, a University of Colorado biology professor who had been director of BSCS since the middle 1960's, assuming the presidency. BSCS, it should be noted, has not for a number of years been simply an NSF grantee elaborating a single curriculum. While still stressing biology, BSCS provides materials for kindergarten through college. It has devised courses for special groups of students, such as the educationally mentally handicapped and academically unsuccessful students. BSCS has augmented its textbooks with a wide range of audiovisual and other supplementary material and has assisted foreign educators in adapting BSCS material for use in their countries.

BSCS's annual budget is up from \$300,000 a decade ago to about \$1.5 million this year. And it has major support from the Office of Education as well as from NSF, plus smaller grants from private foundations. Policy is made by a board of directors drawn mainly from among university scientists. BSCS now employs about 60 people full time, about 20 of them at the professional level, the rest in support jobs. Much of the work is still done, however, by teams of university scientists, public school educators,



Biological Sciences Curriculum Study headquarters near Boulder, Colorado.

and other specialists, and as many as 200 people may be in Boulder at a particular time in the summer participating in writing conferences and meetings.

The next step on the NSF claim is the GAO findings. This could take several months, since BSCS is still completing its response. The delay on the BSCS end is in part a result of the mass of correspondence and documentation which must be sifted through because the years from 1963 to 1974 are involved. Furthermore, BSCS officials and lawyers were fully occupied during the period of the embargo dealing with the problems of that crisis.

BSCS officials decline to discuss the claim in detail while the matter is under examination and the possible subject of litigation, but it is evident that, especially in the case of the main part of the claim, they feel BSCS is the victim of ex post facto findings for actions which had NSF approval.

BSCS's subject matter touches sensitive areas—evolution, sex, population problems, genetics, and racial differences—and by and large BSCS has been bolder than commercial publishers in pointing out social issues related to certain scientific topics. A section on human reproduction being tested for HSP, for example, was one target Conlan chose to criticize.

Some observers regret that Congress involved itself directly in the matter of the claim against BSCS. As it happens, congressional pressure seems not only to have caused the embargo on funding but also hastened the *modus vivendi* which appears to guarantee BSCS continued

funding for HSP while the case is being thrashed out.

Committee involvement was probably inevitable, since underlying the BSCS affair are serious questions about the federal role in curriculum development. That role has been defined largely by ad hoc actions over a period of nearly 20 years. Both the kinds of curriculum being developed and the circumstances in education have changed markedly in that period and the troubles of the last year and a half would seem to indicate that it is time Congress and NSF tidied things up.

—JOHN WALSH

## RECENT DEATHS

**Graham Clark**, 63; former associate clinical professor of ophthalmology, Columbia University College of Physicians and Surgeons; 13 June.

**Patrick J. Farace, Sr.**, 53; associate professor of operative dentistry, West Virginia University; 9 June.

**Frederick G. Keyes**, 90; professor emeritus of physical chemistry, Massachusetts Institute of Technology; 14 April.

**Katharine E. McBride**, 72; former president, Bryn Mawr College; 8 June.

**Cristos D. Papakyriakopoulos**, 62; senior research mathematician, Princeton University; 29 June.

**William W. Wittberger**, 52; former professor of medicine, Ohio State University; 23 June.