going off on its own fast-reactor program, duplicating much of what the French were doing. In 1967, when the time came to agree upon a new 5-year budget for Euratom, France balked; and, with the Euratom staff, totaling some 2700, simmering in despair, it was finally agreed that Euratom would be given approximately $90 million—the amount it had been given annually during the newly expired 5-year budget—to carry on through the year. An assortment of irritations then proceeded to intrude into this already acrid atmosphere. Squabbles broke out over the languages that should be employed in Euratom proceedings, with the French, and now and then the Germans, insisting that their rights were not being observed. And some scientists and engineers in the national establishments of the Euratom nations pointed out that Euratom salaries, fringe benefits, and perquisites tended to exceed theirs. At that point, Euratom was not doing very much on its own to further European nuclear development. Its own budget represented only about 12 percent of the total nuclear spending of the Six. And, as the orchestrator of the Common Market nuclear effort, it was not doing too well either, for, among the Six, there were no fewer than four fast-reactor projects, four heavy-water projects, and an assortment of odds and ends, many of them duplicates in one way or another. During 1968, various efforts were made to agree upon a new budget, but France continued to insist that some radical revisions would be necessary before it would continue to support Euratom.

Among these revisions was the reduction of Euratom's research staff from 2700 to below 1000—a proposal that brought talk of strike at the Ispra center, which employs the bulk of Euratom's staff. France's motives are never viewed with charity by her five partners, and in this case it was speculated that the move to slash the Euratom staff was related to difficulties that the government was having in cutting back some of the overswollen and underutilized staffs in France's own nuclear establishments. If France led the way in axing Euratom, so the reasoning went, she would be in a better position to apply the same process to her own nationals. Support for this interpretation was said to exist in the respectful interest that French officials were showing in Britain's successful start at cutting back its own nuclear research centers and redeploying them to various nonnuclear, industry-related objectives.

Finally late last year, with France holding out against West Germany, Belgium, Italy, the Netherlands, and Luxembourg, a compromise was reached—almost wholly on French terms. A new concept would be introduced into the affairs of Euratom: two cooperative and complementary programs, each of which would receive about $24 million—for a total just a bit more than half of the current annual budget. Under this arrangement, the Six would share the cost of certain Community-wide activities, to the amount of $24 million; at the same time, the Six together would provide another $24 million, but the activities supported by this sum would be on an a la carte basis, with each nation deciding just which activities it wanted to take part in. But, at the same time, it was decided that the Six would have to agree on a new long-term program by mid-1969, or everything would come to a halt. So far, there has been no agreement; and, at this point, the most pressing problem is to round up a few million dollars to provide salaries for 415 staff members, mainly at Ispra, who are not covered by the two $24-million budgets. Complicating the problem is that, after a 2-year probationary period, employment with Euratom is accompanied by a fairly airtight tenure arrangement, but no one seems to know how this is affected by a situation in which there is no money.

While Euratom is foundering, there is growing support for the idea that it might be desirable for the Six to find new areas for cooperation in science and technology. The idea for this goes back to 1967, when a committee of the Six singled out possible areas for such cooperation: data processing, telecommunications, new means of transport, oceanography, metallurgy, pollution, and meteorology. For a time, further examination of the proposal was blocked when the Dutch said they would not participate unless the British, though not holding membership in the Market, were invited to take part in the new program. Finally, the French agreed, and studies are now proceeding on what to do next. Whether the British want to participate, however, remains to be seen, for Britain is more and more rigidly linking its scientific and technical policies to activities that produce a commercial payoff. In this connection, Britain has agreed to take part with West Germany and the Netherlands in the development of a centrifugation process for producing enriched uranium. Amid its various difficulties, this agreement is no source of happiness for Euratom. At present, the United States is the principal source of enriched uranium for the nuclear activities of the Six, but the demands for nuclear fuel are growing so rapidly that Euratom estimates that U.S. production facilities will be taxed by the mid-1970's. As a consequence, Euratom has been proposing that the Six get together and construct a plant, but if the three-nation centrifuge project turns out to be a success, it will once again be the case that fragmentation, rather than European-wide cooperation, is the governing force in European nuclear affairs.—D. S. GREENBERG

Oral Contraceptives: Government-Supported Programs Are Questioned

Last year a VISTA volunteer in Alaska watched in dismay as an Eskimo woman being treated in a federally financed birth-control center was handed a sack of oral contraceptives, given no counseling on how to take them, and told to come back in a year.

At a time when questions are being raised about the safety of the pill, the federal government has become one of the major distributors of the oral contraceptive in family-planning programs for the poor. Some doubts have been expressed about how safely these programs are administered. Officials within the Food and Drug Administration (FDA) have suggested in the past, for example, that its parent, the Department of Health, Education, and Welfare (HEW) has been lenient in monitoring

side effects and adverse reactions to the pill and in supervising general medical health standards in its own programs. One reason for such shortcomings, if they exist, may be that, while HEW programs are federally financed, many are administered on the local level by states, cities, and private organizations, and, as former HEW Assistant Secretary Philip Lee has said, "in many cases we are buying into the existing program."

Lee also commented to *Science* that the quality of care for the poor in the United States is well below what it should be. "We thought we were doing much better than we are doing," Lee said. "The poor were not getting adequate care, either therapeutic or diagnostic." Lee who was named this week to be chancellor of the University of California Medical Center, estimates there are 5 million women of childbearing age at or below the poverty level in the United States. He told *Science* that giving medically supervised family-planning guidance to the entire 5 million would cost about $30 per woman, or about $150 million in all. (This year Congress appropriated about $50 million for birth control programs for the poor, which now serve about a million women.) Many federal family-planning programs are financed in part by the Office of Economic Opportunity (OEO) and by HEW. Some of these programs are operated under such services as Medicaid, Aid to Families with Dependent Children (AFDC), and maternal and child health services. They operate in the slums of large cities and in economically depressed rural areas where doctors are few and facilities often minimum. Other government agencies also provide family-planning services (the Department of Defense purchases and provides pills for about 200,000 military dependents, and AID provides an estimated 14 million women with contraceptives of all kinds in its programs abroad). But the major domestic effort to reach the poor has been through HEW and OEO.

FDA's concern over HEW programs has been focused primarily on HEW's administration of the oral contraceptive. While there is no federal regulatory agency with power to ensure that the pill is dispensed safely, FDA does set distribution standards, and some of its members feel HEW has made "pale" attempts to supervise its own programs. "You can't just dump a bunch of things in a lady's hand and say, here take them," one FDA official said.

HEW officials deny that a physician has any direct responsibility to HEW to submit a report on adverse drug reactions. Lee sees the problem as a jurisdictional one. He feels, in effect, responsibility for monitoring medical practices belongs to the American Medical Association; Lee, a physician, says HEW must rely on the built-in systems of peer review to ensure that physicians practice medicine responsibly. Others feel this is an uncertain means of ensuring safety, particularly in governmented-supported family planning. There are still many unknowns about the pill. It has been linked speculatively to a higher incidence of blood clots among users, and some physicians feel that it may cause cancer of the breast and cervix or increase the rate of growth of such cancers. It is still not known to what extent the pill may deter bone growth in physically immature women, or may mask menopause in the middle-aged.

Recently, two doctors at the National Institutes of Health, Robert E. Markush and Daniel Seigel, linked the pill to a higher incidence of death from vascular diseases among users. Indiscriminate distribution may be equally hazardous. Patients with known or suspected cancer of the breast or cervix, a history of blood clots, liver disfunctions, epilepsy, severe heart disease, or other disorders should not be given the pill. A woman who is pregnant may endanger the health of her child if she takes oral contraceptives. A woman who has not had adequate counseling may fail to take precautions to keep the pill out of the hands of her children. (FDA has reported that the pill causes almost as many deaths among children as aspirin does.)

Proceeding with Caution

Recognizing these dangers, an FDA advisory committee on obstetrics and gynecology in 1966 established guidelines for dispensing the oral contraceptive; these were similar to international guidelines established by the World Health Organization. FDA recommended that, before a woman is given the pill, her medical history should be taken; she should be given a complete physical examination, with special attention to the breasts and pelvis; and she should be warned of the possible side effects of the pill. She should have follow-up examinations at intervals of 6 to 12 months. FDA recommended that an obstetrician or gynecologist, rather than a general practitioner, prescribe the pill. The agency also warned that physicians should use caution in prescribing the pill for young women whose bone growth is incomplete.

In addition, last spring FDA changed the label on the oral contraceptive, calling further attention to the possible side effects and requesting that all physicians monitor adverse reactions to the pill. Unfortunately, FDA has no authority over the dissemination of contraceptives; it inspects pharmacies and rules that the pills cannot be sold without a doctor's prescription, but it cannot regulate what a private physician or a public health official does in his own office or clinic.

HEW became deeply involved in family-planning services after its activity in this area was criticized as inadequate by Senator Ernest Gruening (D–Alaska) in 1966. At a meeting called by John W. Gardner, then Secretary of HEW, an interagency family-planning ad hoc committee was established to explore HEW's role in providing services to the poor. But Theodore Cron, an FDA commissioner of public information at the time of the meeting, who has since resigned from FDA, said that HEW gave little attention at that time to exploring the medical risks involved in programs for distributing birth control information and contraceptives. Cron, who is not a physician, recently commented to *Science* about the meetings: "FDA's input was minimal. We were barely in on the discussions and they treated us as if we were irrelevant."

HEW-supported family-planning programs face many difficulties. HEW officials concede that a great problem may be that HEW administers only some of its family-planning programs directly. The indirectly supported programs operate under grants that fall into two categories, formula grants and project grants. The quality of the HEW programs that operate under the project grants—such as the maternal and infant care program—is supposed to be guaranteed by HEW's selection process; grant recipients are chosen on the basis of the quality of the proposals submitted, the competency of the physicians, and the reputation of the clinics. But in the case of formula grants, such as Medicaid, where HEW is merely "buying into" the prevailing state or local system, HEW relies on locally administered programs, which are not always operated under satisfactory medical conditions that ensure, for example, safe distribution of the pill. Under the 1967 child health provision of the Social Security Act, the federal govern-

ment was authorized for the first time to pay up to 75 percent of the costs of family-planning services for the poor in state, city, and nonprofit private programs. Under this system, HEW provides the money for the programs and, as Commissioner Lee says, "depends on the institution it relates to" to ensure safe standards of distribution.

Federally supported family-planning programs are subject to the laws of the states in which they operate, and this presents an additional problem of jurisdiction. In Wisconsin and Massachusetts, for instance, only married women are eligible to receive birth control information and contraceptives. For years, Connecticut had an anti-birth-control law, which prohibited all use of contraceptives and the distribution of information about their use. Other strong criticism of government-operated family-planning programs has been initiated, both nationally and on a local level, by Roman Catholics who feel that birth control is not within the government's purview.

Family-planning programs are also criticized on the ground that inadequate attention is allegedly paid to the choice of qualified supervisers at the clinical level. The FDA recommends that the physician be a licensed obstetrician or gynecologist. HEW officials admit that, in many government-supported programs, a general practitioner hands out the pill. Cron commented to *Science*, "I know of one family-planning program in one of the northern plain states that is run by an opthalmologist because there is no obstetrician around. It's ridiculous, absurd—an example of a misallocation of resources." Opinions vary about whether a specialist is necessary, but a number of physicians and government officials feel that few medical practitioners, including specialists, pay adequate attention to FDA's labeling recommendations.

Government-financed family-planning programs are further criticized on the ground that they allegedly discriminate against minority groups. Black militants have recently called federal programs a "form of genocide." They claim that, in effect, the government is saying to their race: there should be fewer of you.

HEW programs also have been criticized for not setting an age criterion for women receiving the oral contraceptive. Cron says that about half of all illegitimate babies are born to women under 20. Consequently, the government places no restrictions on giving the pill to young girls, even to adolescents. Criticism of this practice has been sharpest among physicians who feel that the pill may retard growth and that other contraceptives should be used instead.

HEW has nine regional offices. Each has one physician to supervise its field programs, but the difficulty, as Arthur Lesser, a HEW deputy administrator, sees it, is that HEW's limited traveling funds do not permit extensive or frequent field visits. But HEW officials are beginning to look more closely at their own programs. Lesser told *Science* that HEW plans to set up a central information system to maintain complete medical histories of all patients who receive treatment and care in HEW-supported family-planning efforts. While it may be possible for HEW to arrange such a system in programs which it operates directly, it still will have little control in indirect programs, where it can only recommend, not insist, that such a pattern be followed.

In the past 2 years the government has almost doubled the size and support of its family-planning programs for the poor. Unless the Nixon Administration takes an unanticipated change in direction, government-sponsored family-planning programs, which include distribution of the oral contraceptive, will continue and, in all likelihood, increase in the next 4 years. Today the traditional taboos against government-financed birth control programs have diminished. But the demands for government assurance that safe medical practices are followed in the distribution of birth control pills are growing—MARTI MUELLER

RECENT DEATHS

Eliot Blackwelder, 88; emeritus professor of geology at Stanford University; 14 January.

Carleton M. Cornell, 57; chief of surgery at Mary McClellan Hospital; 27 January.

Oliver Freud, 77; son of Sigmund Freud, and former research engineer for the Budd Company in Philadelphia; 27 January.

Hirsch L. Gordon, 72; a neuropsychiatrist who served as clinical associate in the psychiatry department of New York Medical College; 19 January.

Margaret A. Hayden, 84; professor of zoology at Wellesley College; 10 January.

Wilbur A. Nelson, 79; professor emeritus of geology at the University of Virginia; 6 January.

Fritz Reiche, 85; former professor of physics at New York University and senior research scientist at the university's Courant Institute of Mathematical Sciences; 15 January.

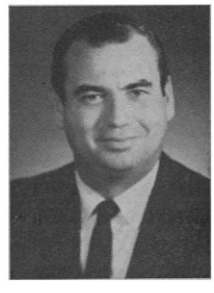
Harrison Sasscer, 46; executive assistant of the Association of American Colleges; 19 January.

Otto H. Scherbaum, 43; professor of zoology at the University of California, Los Angeles; 8 January.

John H. Taterka, 73; director of electroencephalography and professor of psychiatry at the New York University School of Medicine; 17 January.

APPOINTMENTS

E. A. Walker



J. L. Sutton

Eric A. Walker, president of the National Academy of Engineering since 1966 and past chairman of the National Science Board of the National Science Foundation, has announced he will retire before 1 July 1970 as president of Pennsylvania State University. . . . **Joseph L. Sutton**, vice president and dean of the faculties at Indiana University, to president of the university. . . . **Glenn T. Seaborg** will be retained as chairman of the Atomic Energy Commission. Seaborg, whose present term on the commission expires on 30 June 1970, was first named chairman in 1961 by President John Kennedy. . . . **Philip R. Lee**, Assistant Secretary for Health and Science Affairs of the Department of Health, Education, and Welfare, has been named chancellor of the University of California Medical Center. . . . **Stephen Williams**, to director of Harvard's Peabody Museum of Archaeology. . . . **A. Nichols Taylor**, to president of the Chicago Medical School and the University of Health Sciences.... **Gerald S. Hawkins**, chairman of the department of astronomy at Boston University, to dean of Dickinson College.