government officials of the nation. This job makes him aware of the growing concern among political leaders about air and water polution. Last autumn Humphrey responded to part of this concern by sponsoring a conference on the pollution of the Great Lakes, to which he invited many Midwestern public officials.

Humphrey is careful to point out that his science policy interests should not be too narrowly defined. "I'm not just a space and oceanography man," he said, "I'm very interested in NIH and I've visited there often. Also, there are several plant pathologists in my family . . . I'm very interested in agricultural research." Humphrey also points to his support of mineral research and to his long-standing concern for better science information systems in governmental agencies.

"My interest in science stems from the time I was a boy," Humphrey explained, "I took a lot of chemistry and I liked it. I have a layman's interest in science and technology." His father ran a South Dakota drug store; Humphrey worked as a pharmacist and has a degree in pharmacy (as well as a master's degree in political science). After being elected to the Senate in 1948, Humphrey translated his earlier pharmaceutical experience into a strong interest in health legislation. He held hearings on drug regulation and was one of the principal supporters of measures to give the FDA a greater part in monitoring the drug industry.

Work on Disarmament

While he served in the Senate, one of Humphrey's principal concerns was disarmament and the achievement of a test-ban treaty. To some extent, he is still able to maintain an official role in the arms control field. He is the first Vice President to sit regularly on the Committee of Principals, an interdepartmental, Cabinet-level, coordinating group for arms control matters. By statue, he sits on the National Security Council, where arms control and defense questions are often discussed.

It was at the time of his Senate work on disarmament that Humphrey first became acquainted with Jerome B. Wiesner of M.I.T., who served as President Kennedy's science adviser. Humphrey has continued to see Wiesner with some regularity and, perhaps, relies more on Wiesner for scientific advice than on anyone else outside the government. Humphrey is quick to point out, however, that he talks to many people on scientific matters—to Edward Teller, Herbert F. York, Detlev W. Bronk, and George B. Kistiakowsky, as well as government officials such as Secretary of the Air Force Harold Brown, the staffs of the Space and Marine Resources Councils, and Donald F. Hornig, Presidential science adviser. "I meet with Hornig regularly," Humphrey said. According to staff members, Humphrey is careful to defer to Hornig on questions of government science policy. "Humphrey has a very keen awareness that this is Hornig's ship," one aide noted.

Department of Science

Humphrey's work on the Space and Marine Resources Councils seems to have strengthened his belief that scientific activities are too fragmented within the structure of the federal government. In the later years of the Eisenhower Administration, Humphrey strongly supported creation of a Department of Science within the Cabinet. Last week, Humphrey said he had not given up his ideas: "I think the day will come when we will have a Department of Science and Technology."

In his effort to coordinate the marine science activity in the federal government, Humphrey seems to have concluded that it is necessary to set new organizational policies rather than preserve the programs of individual governmental agencies. Some scientists believe that the work of the marine resources council will result in a new marine sciences agency, already dubbed "a wet NASA." Some officials believe that the current effort to coordinate the marine sciences activities will lead to a general reorganization of governmental science activity, a move Humphrey would seem to favor.

Maurice B. Visscher, head of the physiology department of the University of Minnesota, has worked with Humphrey on questions of science and health since Humphrey became mayor of Minneapolis in 1945. Visscher says he is confident that Humphrey will always be committed to supporting scientific endeavor, because "Humphrey is one of the people who truly understands the role of science in modern society."

Eleven of the 36 Presidents of the United States have come to that office from the Vice Presidency. If Humphrey should ever succeed to the Presidency, he would, it is safe to say, be a firm champion of scientific research. Even if he remains in the Vice Presidency, he will probably have an important influence on some science policy questions, especially in the marine sciences area. Largely by accident, many of the responsibilities of the Vice Presidential office are now in science-related activities. Both by temperament and conviction, Hubert H. Humphrey clearly enjoys these accidentally acquired responsibilities.

—BRYCE NELSON

200 Bev: Harmony Prevails as Physicists Close Ranks

It has often been said that the bomb-born dominance of nuclear physicists in the affairs of science and government has been wilted by time and by the demands of other scientists and elected politicians for a turn on the podium.

Those who dispute this evaluation cite occasional, though unverified, reports that the General Advisory Committee of the AEC still functions; or, like believers in life on Mars, cite indications that the present White House atmosphere could support life in that other once-mighty bastion of the physicists, the President's Science Advisory Committee. Perhaps the best that can be said is, Who knows? Nevertheless, on the basis of events that transpired in recent weeks before the Congressional Joint Committee on Atomic Energy (JCAE), it is necessary to recognize that the alumni of the World War II bomb and radar labs possess a kind of experience-tempered political style and class that have no counterpart in any other segment of the scientific community. If the Mohole proponents had possessed half their savvy, that mighty drilling platform would no doubt be at sea today.

On the agenda of the powerful Joint Committee was the long-fought-over 200-Bev proton accelerator, which the AEC wants to build at Weston, Illinois, and for which it was asking the com-

NEWS IN BRIEF

• **DECLINING PHYSICS ENROLLMENT:** While the demand for physicists in education, research, and industry is increasing, the number and percentage of students enrolling in physics education is decreasing, according to the American Institute of Physics (AIP). In 1960, the number of junior physics majors totaled 1.78 percent of their freshman class, dropping to 1.16 percent in 1965, and projected to fall to 0.76 percent in 1968. The related trends found by the AIP included: the number of undergraduate physics majors has been decreasing during the last 5 years; and the number of physics bachelor's degrees granted peaked in 1962 and has since leveled off. However, the number of physics graduate students, both first-year and total, has increased steadily. (This was attributed to a decreasing undergraduate drop-out rate and an influx of graduate physics students from other areas. However, the supply of new physics bachelors has reached a low enough level to make it impossible for the rate of increase of first-year graduate students to continue.) Possible reasons for diminishing enrollment in physics studies included inadequacy of high school teachers; the complexity of the Physical Science Study Committee program; shift of interest to humanities; and lack of interest in the long-term commitment demanded of physics education. Drop-out reasons during the junior and senior year included difficulty with mathematics, poor college physics teaching, extra requirements for physics study, lack of personal contact between faculty and student, and the popular glamorization of physics failing to emphasize the hard work needed first. These statistics are found in a report, *Physics Manpower 1966 Education and Employment Statistics*, available for $2.50 from the American Institute of Physics, 335 East 45 St., New York 10017.

• **MEDICAL SCHOOL TO INCLUDE HUMANITIES:** A humanities department will be included in the new College of Medicine of Pennsylvania State University at the Milton S. Hershey Medical Center, scheduled to begin operation next September. The department, according to Dean George T. Harrell, will include faculty in comparative religion, philosophy and ethics, and history of science, and will start with one man in each field. Eventually, Harrell said, he hopes to double the faculty. The humanities will be taught through seminars and lectures interwoven throughout the regular medical school curriculum. The first appointment to the faculty was announced last week. E. A. Vastyan, currently chaplain at the University of Texas Medical Branch in Galveston, was named assistant professor of humanities. He will develop the curriculum material and teach comparative religion. He holds a B.A. in English from Denison University, and a B.D. from the Episcopal Theological Seminary, Cambridge, Massachusetts.

• **NEW FDA MAGAZINE**: The Food and Drug Administration began publication this month of a slick, popular-style magazine dealing with drug law enforcement, medical advertising, and other matters in the agency's jurisdiction. Titled *FDA Papers*, the magazine will be issued monthly, except for combined issues July-August and December-January. Subscriptions may be ordered from hte Superintendent of Documents, Government Printing Office, Washington, D.C. 20402, at $5.50 a year ($6.75 for foreign mailing).

• **EDUCATION RESEARCH CENTER**: A new institution for educational research and development, Education Development Center, has been formed by the merger of Educational Services, Inc. (ESI), and the Institute for Educational Innovation.

The new private, nonprofit institution will use the facilities of ESI in Newton, Massachusetts, as its operating nucleus. These include laboratories for curriculum development and a major film and television studio.

Sources of support for the new center include the U.S. Office of Education, the National Science Foundation, the Agency for International Development, and a number of private foundations and industrial concerns.

Franklin Lindsay, president of Itek Corporation will be chairman of the board, and James R. Killian, Jr., chairman of the Corporation of the Massachusetts Institute of Technology, will be honorary chairman. Arthur L. Singer, Jr., formerly executive associate of the Carnegie Corporation of New York and, since September, president of the ESI, will be president of the new institution.

mittee for $10 million as a down payment toward the ultimate construction cost, variously estimated at from $240 million to $395 million.

Now, there are all sorts of political inflammables in and around the 200-Bev accelerator. The question of whether it should be built was tacitly settled long ago with an informal understanding among the physicists, the Executive branch, and the Congress that a big new machine would be started every 5 or 6 years. But the questions of location and management of the 200-Bev machine were not nailed down in this understanding, and, among some *aficionados* of high-energy fraticide, it was expected that the community might blow itself to bits on these matters. However, as the script unfolded before the Joint Committee, it was apparent that the particle physicists want this machine very much, so very much, in fact, that there now prevails in high-energy physics what must be called the Peace of Seitz—that is, Frederick Seitz, president of the National Academy of Sciences, who, fearful of internecine combat in the community, last year quietly organized a nationwide consortium in which the high-energy physicists now perform with the harmony of a championship drill team.

Comprising 46 universities, ranging from those that possess mighty accelerators to those that are yet to acquire their first marble and inclined board, the consortium, known as University Research Associates (URA), presented itself to the Joint Committee last week as a candidate for managing the construction and operation of the accelerator. And though the committee reserved judgment, saying that it wanted to consider the matter carefully, the fact is that you can't beat something with nothing; the established pattern is that the AEC's accelerators are contracted out to university operators, and URA already contains all the elements out of which an alternative managerial setup might be fashioned.

In any case, URA is a power-packed, many-layered organization with a membership that stretches to virtually every important segment of the science-government relationship. Its president is Norman F. Ramsey, of Harvard, who has long been active and influential in Washington science affairs, and especially in the councils of high-energy physics. URA's ultimate governing body is a council of the 46 participating universities, chaired by Kenneth S. Pitzer, president of Rice University and

also a veteran of the Washington science scene. Then comes a 21-member board of trustees, about evenly divided between scientists and administrators, which is chaired by Henry D. Smyth, of Princeton, a distinguished elder statesman of science.

The striking, but not surprising, thing about URA is not that it exists (since, if it didn't, something like it would have to be established to build and run the 200-Bev accelerator) but that it has worked so well to bottle up the strong feelings that were generated throughout the physics community by the competition for the 200-Bev machine.

It is not improbable that the decision to build the machine in Illinois constituted a death warrant for high-energy physics at the Lawrence Radiation Laboratory (LRL) at Berkeley, which conceived and designed the machine, with the expectation that it would be built nearby. LRL people have wept copiously over the political tricks of fate that led to their machine being put in a national sweepstakes, but in their appearance before the committee last week they were statesmanlike and dignified. LRL director Edwin M. McMillan and Edward Lofgren, the chief of the design group for the machine, said that a good machine, built as quickly as possible, was their chief interest, and they would cooperate in every way possible to achieve this.

At the outset of the hearings, AEC chairman Glenn T. Seaborg emphatically stated that "there was no political interference in our choice of the Weston site. . . . The President left the choice of the site entirely up to the Atomic Energy Commission." Just why the President chose to behave in such fashion is not clear, but the fact is that in a city well populated with industrious cynics, no one has yet been able to find a political speck on the site selection.

Testifying before the full committee, on 7 February, Senator Javits of New York explained why disinterested analysis inexorably leads to the conclusion that the machine should be located at the Brookhaven National Laboratory, on Long Island. He got very little response. Last week the hearings resumed under the auspices of the JCAE's subcommittee on research and development, chaired by Mel Price, of Illinois. He was not inclined to explore the issue of whether the accelerator should be built in Illinois.

The only matter that stirred up any feeling was that of the civil rights situation in and around Weston. Clarence Mitchell, director of the Washington bureau of the NAACP, said, "If the AEC had set out to find a site where colored employes, scientists, and visitors would be most likely to encounter discrimination in housing, Weston could clearly qualify for that dubious honor." If consideration is confined to the six finalists in the site selection, there is no doubt that Mitchell is right. The 35 communities surrounding the site area, he said, all follow discriminatory housing practices; two of them considered and "quietly buried" open-occupancy ordinances; and, when Governor Kerner issued an executive order on housing, following the legislature's failure to pass "fair housing" legislation, real estate interests blocked it with an injunction.

Seaborg immediately responded that "a satisfactory solution to the human rights problem is more important than this accelerator." He agreed that the civil rights situation in the Weston area was not satisfactory, and pledged, "The Commission means to have an affirmative action program on non-discrimination and equal employment opportunity every step of the way."

Representative John N. Erlenborn, a Republican whose district includes Weston, offered a clarification of the situation in his area. He conceded that some real estate men from DuPage County, where Weston is located, had sought the injunction against the Governor's housing order. "There is a reason for this," he pointed out; "DuPage County realtors have been among the leaders, both in the state and in the nation, in the real estate business. It is natural that these leaders would have been among those challenging this executive order. It affects their business and their livelihood."

Erlenborn pointed out to the committee that, "in the years before the Civil War, opponents of Negro slavery operated an illegal device known as the Underground Railway. Its stations were places where escaped slaves could find refuge as they made their way to Canada. One of these stations was in Wheaton, the county seat of DuPage County."

And he also noted that "West Chicago, the nearest town to Weston, houses a considerable number of people of Latin American descent, and I don't think this minority can claim to be the victims of police brutality. For the chief of police is Joe Buenrostro."

Senator John O. Pastore (D–R.I.), chairman of the Joint Committee, said, "I don't think we ought to put a nickel in that accelerator at Weston if a Negro Ph.D. is going to be denied the right to go in there."

"Or a janitor?" asked Edward Rutledge of the National Committee Against Discrimination in Housing.

"Or a janitor," said Pastore.

Last week Weston passed a "fair housing" ordinance, but civil rights leaders said it was "window dressing," and renewed their appeals to the Joint Committee.—D. S. GREENBERG

NATO: A North Atlantic Technology Organization?

Paris. Science in the North Atlantic Treaty Organization could until very recently be likened to a silent partner with a small share of the business. Now it appears that the role of science and technology will grow bigger and more conspicuous.

The withdrawal of France from NATO—a more selective withdrawal than is generally realized—has left the alliance with a number of military and communications problems. And the impending move of NATO headquarters from Paris to Brussels gives an appearance of retreat which hasn't helped morale. But NATO's fundamental problem is that of adjustment to conditions in Europe far different from those which caused the alliance to be formed, nearly 20 years ago.

The necessity of changing NATO to meet changed circumstances, particularly the altered relations between NATO countries and the Warsaw Pact nations, was a dominant theme at the most recent NATO ministerial meeting, in December. British Foreign Minister George Brown emphasized, in a sonorous phrase, that the purpose of NATO is defense, deterrence, *and* detente. And while this seems to be wanting it both ways, he apparently caught the sense of the meeting.

On a different tack, the Belgian