zinski, who hates and mistrusts the Russians obsessively and is an effective opponent because he doesn't abide by the accepted rules of closed politics.

Quaife's affair with a married woman is used in a veiled way to influence the climactic vote on an Opposition motion against Quaife after the white paper is published, but probably it has no decisive effect on the outcome.

If Snow's novel is to be taken as a commentary on the present situation in Britain, some updating is necessary. Memories of Suez have dimmed, and the signing of the partial nuclear test ban treaty just a year ago seems to have blunted the nuclear issue.

In 1959 the Labor Party stood for a policy of nuclear disarmament, and the Conservatives, for the independent deterrent. As Britain moves close to another election, the nuclear issue is cloudier. Cancellation of the Skybolt missile program by the Pentagon and substitution of an agreement under which the United States would help Britain build and arm Polaris submarines leave a question of how independent the British deterrent would really be. The Labor Party, for its part, has not said definitely it would cancel the Polaris agreement.

In the United States, discussion by the national candidates of who has authority to order use of nuclear weapons gave rise to a campaign debate which for a time sounded a little like a game of button, button, who's got the button.

As this was written, the expected debut of China as a nuclear power had ignited talk in both Britain and the United States on ways to limit the spread of nuclear weapons, but in neither country is the question of how (or if) the ultimate control of nuclear war can be acheived more than a subsurface issue.

While the situation has altered somewhat since the period of Snow's novel, his major points stand up: in general it is very difficult in the Western democracies to deal with nuclear policy in open politics, and, in particular, any move in the direction of arms control or disarmament must satisfy the political Right or at any rate the Center. Support of liberal opinion—in Snow's terms, "the disarmers, the pacifists, the idealists"—ironically may mean the political kiss of death.

As for the scientists in their long and in many cases reluctant embroilment in what the author calls the "mixture of technology, politics, ideology, moral conscience, military foresight," one suspects it may be Snow expressing his own feelings when he describes a Cambridge scientist speaking, with a mixture of disappointment, stoicism, and middle-aged weariness, on the eve of the vote.

"He did not believe that we stood more than an outside chance. He did not believe that any government could bring off more than a poor compromise. He believed that any government would have to repudiate a man who tried to do more. But he did not tell me so. He had been close enough to decisions to know the times when it was better not to be told. Instead he was ready to help: and yet, as he said, he wasn't eminent enough as a scientist to carry weight. Somehow, he remarked, the high scientific community had lost either its nerve or its will. There were plenty of people like himself, he went on, ready to be active. But the major scientists had retired into their profession—'There's no one of your standing,' he said to Francis, 'who's ready to take the risks you took twenty years ago.' It wasn't that a new generation of scientists hadn't as much conscience or more: or as much good will: or even as much courage. Somehow the climate had changed, they were not impelled. Had the world got too big for them? Had events become too big for men?"—JOHN WALSH

## Medical Research: Congress Adds $10 Million to President's Budget for Special Studies on Leukemia

The slow-dawning discovery that money alone will not produce dramatic cures for disease has left Congress somewhat in the position of the old man who discovers that riches do not bring him happiness. Testifying before the Senate and House appropriations committees this year, officials of the National Institutes of Health were pressed to explain why some of their funds were left unspent when the world's diseases are still upon us. The indulgent uncles sought to know why some of their gifts had lain unopened and the blow was not lessened by explanations that funds may occasionally outrun the personnel available to use them. Despite its disappointment with what it termed NIH's "conservatism," Congress' impulse to continue its benefactions was strong. This year's NIH budget of $965,992,000 was $9 million more than President Johnson had requested and roughly $50 million more than the appropriation for fiscal year 1964. The most notable addition to the President's budget was a special appropriation of $10 million given to the National Cancer Institute (NCI) for research on leukemia.

The decision to undertake an especially intensive leukemia program originated with the Senate appropriations committee and passed the Congress after the concurrence of members of the House committee. The decision appears to have grown out of three things: (i) a general desire for visible progress against disease; (ii) a feeling, in the words of the House appropriations committee report, that "the Cancer Institute has tended to take a more conservative approach than other institutes. While it is gratified with the progress that has been made," the report stated, "the Committee is impatient and wishes that this institute would be more aggressive"; and (iii) the emphasis placed on progress in leukemia research during the hearings in both houses.

Leukemia, NCI director Kenneth Endicott told the House committee, "is the area where we are moving along most rapidly, and where the experts seem to feel there is the best chance of spectacular progress. . . . The picture on the etiological side," Endicott said, "is really tantalizing. We have now established beyond any doubt that a virus infection is the major cause of leukemia in animals. . . . These animal leukemias make beautiful laboratory models which you can then take and apply to man. Utilizing the new techniques that have been developed largely in the rodent," Endicott went on, "it is now possible, with the help of our new centrifuge [the result of a collaborative program between the NCI and the Atomic Energy Commission] to demonstrate the virus particles in virtually all patients with acute leukemia, and we have been unable to find similar materials in controls." Endicott also pointed out the possibility that a proven viral etiology for leukemia might in turn lead to the development of "some kind of immunization procedure." Endicott also stressed that the experimental treatment of leukemic children was beginning to produce encouraging results.

Adding to the general enthusiasm expressed at the appropriations hearings by government witnesses was what one private witness described to the Senate committee as "a virtual avalanche of very important new findings" that sud-

*(Continued on page 321)*

(Continued from page 236)

denly accumulated during the summer. One of these findings was an apparent break-through of researchers at Roswell Park and elsewhere in attempts to grow the virus particles cited by Endicott in large quantities. Another was the discovery by a team of researchers from the Pfizer laboratories, the South Jersey Medical Research Foundation, and the University of Pennsylvania that some of the particles associated with leukemia were present in cow's milk. Although NCI and other officials are careful to emphasize that this is only one of many new clues, it is clearly one that raises the possibility of a major public health "scare" and may have influenced the Senate committee, which had not yet completed its deliberations.

The major influence, however, appears to have been the conviction that the level at which NCI had planned to fund leukemia research was not high enough to exploit satisfactorily all the new discoveries. The appropriation followed the discoveries very quickly and shows how speedily Congress can react when the significance of scientific information is presented to it in comprehensible fashion. In fiscal 1964, about $24 million was spent on studies related to leukemia, with all but $250,000 going to support outside grantees and contractors. Although the spending level for the current fiscal year had not been determined, it appears that with the special appropriation, it will total around $33 or $34 million. The additional $10 million has been specifically earmarked according to the NCI for (i) efforts to substantiate the viral nature of leukemia and to develop vaccines; (ii) developmental work to minimize the dangers to scientists working on isolating and growing the viruses; (iii) further clarification of leukemia in animals and its relation to man; and (iv) intensive development of new leads in chemotherapy, supportive therapy, and pharmacology.—ELINOR LANGER

## Announcements

The National Bureau of Standards Institute for Basic Standards has initiated a service for the **calibration of humidity measuring instruments**. The facility is being offered to both government and the public, but only instruments suitable for use as laboratory or plant standards are being accepted