paying higher salaries than their professors are being paid. In taking these jobs in lieu of graduate school, these talented individuals will not develop the background to do basic research." As a result, Fitch said, the next generation will not be as well trained as this one.

Hamilton Smith, professor of microbiology at Johns Hopkins University and a 1978 Nobel winner in medicine, asked for an increase in federal aid in order to "prevent the gutting of the university faculty." The biologists' commercial success caught many schools unprepared, he said. "The new companies are quickly hiring away some of the best Ph.D.'s. . . . I'm not saying this is necessarily bad," Smith added. He would like the government to help make university jobs more attractive.

Smith also worries that the new biotechnological gold rush could destroy the academic environment for basic research. "Free exchange of scientific information . . . may suffer, and long-term progress may be traded for short-term financial gain . . . . We still do not know the structure of human chromosomes, how the genes are arranged, how tissues and organs are formed, or even how any single human gene is regulated and expressed." Smith decried a tendency among young scientists pressed for cash to avoid risky and innovative projects. "They are increasingly doing routine research that guarantees publication and consequently funding and promotion."

The subcommittee members listened attentively to all of this, and to the remarks of Baruj Benacerraf of Harvard University, winner of the 1980 Nobel in medicine, and to James Cronin of the University of Chicago, winner with Fitch of the 1980 physics prize. But these witnesses seemed at a loss when confronted with the voice of the new Administration, in the person of Senator Harrison Schmitt (R-N.M.). Schmitt, who will be chairman of the Senate's science subcommittee, was invited to sit in on the hearing. He suggested that it might be a good idea for scientists to submit more funding requests to private foundations and fewer to the federal government. Benacerraf replied that that would be difficult because, in his experience, the government reduces its support when it learns that a grantee has won private aid. Fitch said that he would not know where to look because private foundations do not give away much money for basic research in physics.

Schmitt said that he hoped to explore this idea further and then departed to join the floor debate on the largest defense appropriation bill ever considered by Congress.

Hiatt Warns of the "Last Epidemic"

Howard Hiatt, dean of the Harvard School of Public Health, has been swept up in a campaign to prevent what he calls "the last epidemic our civilization will know," nuclear war. He has been involved in the effort since early this year, when a group called the Physicians for Social Responsibility held a meeting in Cambridge, Mass., on the effects of war (*Science*, 28 March).

Convinced that Americans are not sufficiently aware of the horrors that would accompany a nuclear attack, Hiatt has taken it upon himself to describe them in graphic detail to as large an audience as he can reach. He has appeared on television, spoken at conferences, written to the dean of every American medical school, and taken his message to the American Medical Association (AMA). The latter agreed to publish an editorial by Hiatt in the 21 November issue of its journal.

Hiatt's purpose, he says, is to let Americans know that they cannot expect to receive any significant aid from the medical community after a nuclear attack. It is unlikely that a nuclear war would be "limited." Second, Hiatt argues that even a strike on a single city would overwhelm medical facilities so badly that there is no point in preparing for one. Even if one makes the most optimistic assumptions, survival would be a matter of chance.

A single megaton bomb dropped on a large city, Hiatt calculates, would destroy most of the hospitals, for they are usually in the center of the city. And, in addition to the people it would kill, it would create tens of thousands of burn victims. None could expect much help, for the demand for plasma alone would be insatiable.

Waiting for Reagan

"My name is always on the list, and I never get chosen," says William Nierenberg, commenting on the rumor that he and Arthur Bueche are candidates to be the next science adviser to the President. Nierenberg, director of the Scripps Institution of Oceanography, has been an adviser to the government since his early involvement in the Manhattan Project to build the atomic bomb. Bueche, vice president of General Electric for science and technology, has been advising the White House for at least a decade.

Some of Reagan's top aides are now attending meetings in California chaired by William French Smith, the probable next attorney general, to review nominations for the Cabinet. Reagan is expected to decide on the first dozen positions by December. Once this has been done, the lower ranks will be filled. No science adviser has been selected, says a participant in the Smith meetings.

Alpha SIO Photo

William A. Nierenberg

According to Nierenberg, there has been "some talk" that the President's science adviser in the next Administration may be even less noticeable than in Carter's government. If Reagan runs the presidency as he did the governorship of California, special counselors like those for science and national security may serve as coordinators rather than policy-makers. If this happens, the science post may not attract one of the heavyweights in the field.

Eliot Marshall