fied because they were lost in a move.

EPA officials, including former administrator William D. Ruckelshaus, make it plain that the HEI is meant to bring order out of chaos in carbon monoxide research. This is HEI's first and most important task. The EPA seems less concerned about the nature of the results than determined to get data it can trust. Meanwhile, the auto company sponsors hope that HEI will find that the angina danger has been overblown. If HEI's work does not help relax EPA standards, the companies hope it will at least discourage the EPA from tightening them.

HEI unavoidably will be pressured to cut its science to fit a pattern. But the problems are likely to arise less in the context of a particular topic than in the overall plan of research. Some tensions of this sort appeared at the annual meeting. Both EPA and auto company officials spoke about the need to shift the research plan in new directions, in each case to satisfy some immediate needs.

The companies are worried about a move to require "on-board" devices that would prevent vapors from escaping from the gas tank during fueling. And the EPA is eager to get information on formaldehyde, a problem chemical that has raised its head in other parts of the agency. Neither the government nor the companies seemed particularly eager to follow through on the diesel research that was so urgently requested a couple of years ago. General Motors has bowed out of the diesel market, and, contrary to forecasts only a few years old, there will be no diesel boom. Yet the research begun earlier is now beginning to produce results.

Several members of HEI's research committee spoke out, making it clear they were not willing to follow anyone's bandwagon. Faddishness and inconstancy, after all, are exactly the problems that bedevil government-sponsored programs. And HEI's leaders say they will not be deflected from their deliberate plans for carrying out research which they think is important, although they do poll sponsors to adjust their priorities.

Auto executives and EPA officials who were asked about HEI's value agreed that it has already shown itself capable of recruiting excellent researchers and setting very high standards. The EPA has pledged funding through 1988, and the auto companies are likely to keep up their side of the game at least that long. So the real test of the institute will come in the next year or two, as results come out and as regulators and manufacturers will have to act on them or ignore them.—**ELIOT MARSHALL**

OTA Says African Aid Focuses on Wrong People

A congressional research office, arguing that the food problems in sub-Saharan Africa will almost certainly worsen in the next few years, has advocated a shift in the focus of agricultural policies in the region toward helping small-scale, subsistence-level farmers and herders. Such producers have largely been ignored by both national governments and foreign assistance programs, according to a report by the Office of Technology Assessment (OTA).*

The study notes that Africa is the only major region of the world where per capita food production has declined over the past two decades, a consequence of high population growth rates and stagnant food production. These underlying trends will continue to cause food shortfalls in the region well after the current drought-induced crisis ends.

Focusing assistance on many low-income small farmers is a far more difficult task than concentrating on raising the productivity of a few larger producers, however. In particular, it requires better developed research and extension programs both to develop the appropriate technologies and to transfer them to the field.

The OTA study notes that these services are generally a very weak link in the chain of technological change in African agriculture. Similarly, the directors of international agricultural research centers who met in Washington in late January identified the generally underdeveloped state of national agricultural research and extension services as a major barrier to the transfer of new technologies from the centers to farmers (*Science*, 8 February, p. 616).

Consequently, OTA recommends that the United States increase its support to indigenous African universities and research centers and encourage programs in which farmers, herders, extension agents, and agricultural research workers are involved.

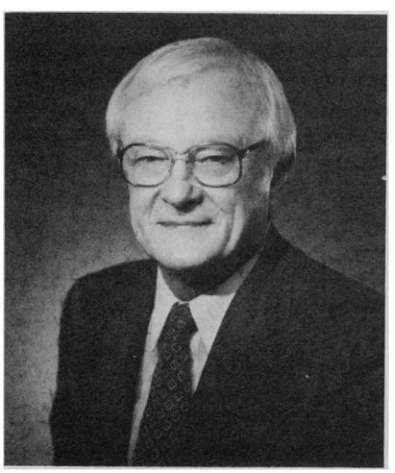
In general, the OTA study also argues that U.S. assistance to sub-Saharan Africa has been too crisis-oriented and has lacked clear and consistent goals. It emphasizes that long-term, consistent support, which is not buffeted around by shifting political winds in Washington, will be needed to make any inroads into Africa's food production problems.—**COLIN NORMAN**

**Africa Tomorrow: Issues in Technology, Agriculture and Foreign Aid* (Office of Technology Assessment, Washington, D.C. 20510).

National Science Board Seeks New Role

The National Science Board, the top policy-making body of the National Science Foundation (NSF), is attempting to shed some of its detailed responsibilities in order to involve itself more deeply in NSF and national science policy. It also intends to pay more attention to science education and human resource issues.

The board, whose statutory responsibilities include overseeing NSF programs and providing an independent source of advice on science policy, has never been a major player in Washington politics. This stems in part from a legal requirement that it must approve every NSF grant larger than $500,000 a year or which totals more than $2 million, a responsibility that takes up a large amount of the board's time. Equally important, by the time a project reaches the board for approval, it is generally too late for the board to exercise much influence on its substance.



Roland Schmitt

Consequently, at its meeting last month, the board agreed to ask Congress to give it the power to delegate

award-approval authority to the NSF director. The aim is to free some of the board's time to review programs and projects at an earlier stage, when it can have more influence on the way they are shaped.

In addition, the board agreed to overhaul its committee structure. It will now have two standing committees, one to conduct the program oversight and review responsibilities and the other to oversee the foundation's science education directorate. The second committee will also be concerned with programs designed to bring women, the handicapped, and minorities into scientific careers—programs that have generally been given short shrift by the Reagan Administration.

These changes are said to be largely the work of Roland Schmitt, the head of R&D at General Electric and chairman of the science board. Schmitt has risen rapidly in prominence in the national science policy scene over the past 2 years.

—COLIN NORMAN

A Guide to Biology Texts

Last year, Texas rescinded a decade-old rule that required biology textbooks used in the state's public schools to carry a disclaimer that "evolution is treated as theory rather than fact." Yet, according to a review of 18 books submitted by publishers for use in Texas schools this year, the effects of the rule live on.

According to Wayne Moyer and William Mayer of People for the American Way, three of the proposed textbooks contain no mention of evolution at all, and several others include "highly qualified statements about evolutionary theory, omission of important evidence and continued inclusion of the 'Texas disclaimer'."

Moyer and Mayer, who reviewed the textbooks last year as part of an effort to head off the influence of creationists on the selection of books in Texas, have now published their analyses in the form of a consumers' guide,* intended to alert other school districts to what they perceive as the strengths and weakneses of the books submitted in Texas.

Their concentration on Texas is explained by the fact that Texas is such a huge market that it strongly influences the nature of textbooks sold nationwide. Publishers cannot afford to publish a special edition of their books for Texas, and thus what Texas approves is generally what the rest of the nation gets, note Moyer and Mayer.

There have, however, been some recent major changes in Texas that have radically altered the environment for textbook selection in the state. The requirement that publishers include a disclaimer about evolution being only a theory was dropped following a threat of a lawsuit by People for the American Way, an organization established by television producer Norman Lear as a counterpoint to the Moral Majority.

In addition, after a critical examination of the state's education system by a commission headed by computer magnate Ross Perot, the legislature approved a bill that replaced the elected State Board of Education with a body appointed by the governor. The education commissioner, who had held office for more than a decade, also resigned last fall. The new state-level apparatus provides less of a platform for the creationists, according to Moyer.—COLIN NORMAN

*A *Consumer's Guide to Biology Textbooks* (People for the American Way, Washington, D.C., 1985), $5.

Europeans Agree to Join in NASA's Space Station

Ministers representing the 11 member countries of the European Space Agency last week gave their approval in principle to collaborating with the United States on the development of a manned space station. They also agreed to increase their budget for joint space projects by 70 percent over the next 5 years to pay for this and a number of other new projects, including the development of a new generation of Ariane launchers.

Meeting jointly for the first time since 1977 in Rome, the ministers, together with observers from three other European nations, gave their approval to a package of proposals aimed at setting the framework for European cooperation in space over the next decade.

Over a period of 5 years, a total of $160 million will be spent on the preliminary design of an experimental module expected to form Europe's main contribution to the space station, and on the development of a special cryogenic engine to power the new launcher, Ariane V. West Germany will take the lead on the first of these projects, and France on the second.

The ministers declined a proposal from the French government that they also agree to joint development of a manned minishuttle suitable for in-orbit operations, known as Hermes. The French had earlier claimed that this project was an integral part of their Ariane V proposal, the two together providing Europe with its own ability to construct a space station and engage in other space activities early in the next century.

However, in their final communique, the space ministers explicitly mentioned Hermes as a possible project for later collaboration, suggesting that in the meantime France might seek other partners on a bilateral basis, as it has already done with the SPOT remote sensing satellite. This move seems to have left the French satisfied that Hermes now figures officially on Europe's long-term agenda, even if it may take 2 to 3 years longer to complete than they had been suggesting. They have already received support for Hermes from Belgium and Italy, although both West Germany and Great Britain are still lukewarm.

Britain, in turn, failed to obtain a commitment for European funding for its own project for a reusable launch vehicle, known as HOTOL, which is currently receiving preliminary studies at British Aerospace. Again it was suggested that other countries might join the British initiative on a bilateral basis.

After the meeting, Hubert Curien, the French minister of research and technology and previously chairman of the ESA council, said that it had allowed European countries "to affirm their unambiguous support for the two principles on which we want to build Europe's space activities in the next 15 years: autonomy and coherence."

As for long-term collaboration on the space station, the meeting agreed that this depended on the successful outcome of current negotiations with the United States on the conditions under which they would be allowed to participate.—DAVID DICKSON