

additions, small and large, with only rarely an event that changes the design." Besides, "we do not believe that the scientific achievements of the IBP can yet be viewed in full perspective."

The evaluation committee derives a number of "general precepts" from the IBP experience that it hopes will enable the managers of future large-scale programs avoid some of the problems that plagued the IBP. This focus of the report

inevitably led the evaluators to harp on the program's shortcomings. But the committee's overall judgment of the IBP is essentially favorable.

"Although the U.S. program failed to realize certain objectives, such as the production of workable, large-scale models for entire ecosystems and the establishment of readily accessible data banks, it convincingly demonstrated the effectiveness of a multidisciplinary ap-

proach to research on complex problems," the Academy group says. "We conclude that, overall, the U.S. performance was creditable and that substantial scientific contributions were made. The coordination of research projects left something to be desired, but we doubt that under the prevailing circumstances a substantially more coherent program could have been developed."

—PHILIP M. BOFFEY

Jimmy Carter's Advisers: Drawing from the Public Interest Movement

New aides and advisers whom Jimmy Carter has selected would appear to offer an insight into the character of a Carter administration if he is elected. The names of such staff members and advisers, including those on a science policy task force headed by Lewis M. Branscomb (chief scientist for IBM), are now becoming available.

One of the most interesting and perhaps significant indicators is that the 10-member transition team that Carter has set up in Atlanta includes three young men with extensive experience in the public interest movement. One of the three is responsible for government organization, which of course takes in the organizational arrangements for making and executing science policy. Another is responsible for policy planning with respect to energy and natural resources management.

The Carter campaign organization has recently assembled 16 advisory task forces, including the one for science policy (see box). The makeup of the science policy task force does not, however, allow easy characterization except to say that most of its members appear to be from the mainstream of the scientific community. In any case, the potential influence of such advisers will probably be much less than that of the full-time policy planning staff which has been assembled in Atlanta. This newly established part of the Carter-Mondale organization has the responsibility of outlining the course of a new administration and identifying many of the people who would hold important positions in it.

The three policy planners with backgrounds in the public interest movement are:

- Harrison Wellford, policy coordinator for government organization. Wellford, 36, was the first executive director of Ralph Nader's Center for the Study of Responsive Law in Washington. He comes to Carter's organization from the staff of Senator Philip Hart (D-Mich.), who has himself been closely identified with encouraging the public interest movement.

Wellford, who is from North Carolina and Virginia, is a graduate of Davidson College and was a Marshall Scholar at Cambridge University. He also was a research associate at the Institute of Politics at Harvard, and holds a Ph.D. in government from Harvard. His book *Sowing the Wind: Food Safety and the Chemical Harvest*, written under Nader auspices, was accepted by Harvard for his doctoral dissertation. Wellford recently received a law degree from Georgetown University.

- Joe Browder, policy coordinator for energy and natural resources. Browder, a 38-year-old native of Amarillo, Texas, gave up his position as director of the Environmental Policy Center (EPC) in Washington to join Carter. Although relatively little known outside environmental circles, the EPC is an important lobbying group, having led the effort to pass strong federal legislation with respect to such matters as strip mining, land use, and outer continental shelf oil development. An adjunct of the EPC is the Environmental Policy Institute, which has made some useful analytical studies.

Browder holds no college or university degrees, but he is a talented, self-taught amateur naturalist and an achiever in the manipulative arts on a par with some of the finest and most respected Washington lawyers. He had a big part in persuading the Nixon Administration to make a half-billion-dollar commitment to the preservation of Florida's Big Cypress Swamp. His first experience as a professional environmental activist was as south Florida field representative for the National Audubon Society, and he later headed the Washington office of Friends of the Earth.

- Joe Levin, policy coordinator for health, welfare, courts, and criminal justice. Levin, 33, was formerly legal director and general counsel of the Southern Poverty Law Center in Montgomery, Alabama. He will work closely with Larry Bailey, a 35-year-old black from Charles Town, West Virginia, who is policy coordinator for urban affairs. Bailey has a master's degree in education from Antioch College and was formerly assistant director of the U.S. Conference of Mayors.

The coordinators for the other three policy areas—business and labor, foreign policy and international security, and economic planning and the budget—come from more conventional backgrounds. The budget policy coordinator, Bowman Cutter, 34, is a Virginian whose last job was as assistant to the president of the *Washington Post*. He is a Rhodes Scholar and a graduate of Harvard and Princeton's Woodrow Wilson School.

Anthony Lake, 36, one of two foreign policy specialists, was special assistant to Henry Kissinger when the United States invaded Cambodia in 1970. He immediately resigned in protest.

All of the policy coordinators are expected to exchange information and suggestions regularly with Richard Fleming, the transition staff's talent hunter who will be collecting the names of promising prospects to serve in a Carter administration. The 31-year-old Fleming holds

a master's degree from the University of Pennsylvania's Wharton School and was formerly associate director of Central Atlanta Progress, a downtown development and public relations group.*

Carter's science policy task force, like the some 15 other task forces put together for the campaign, is a loosely structured and "open-ended" affair designed to allow Carter and his issues staff in Atlanta to draw on a diversity of expertise in formulating the Democratic presidential nominee's own policy positions. Carter's aides emphasize that the task forces "will not be hammering out grand position papers of their own."

Led by "coordinators" instead of chairmen, the task forces are expected to stay out of the limelight—indeed, up to now the lists of task force members have been kept confidential, although some names (including those of the coordinators) have been made available. The release of the list of science policy advisers thus represents an exception to that general policy.

Edward David, former science adviser to President Nixon and now president of Gould Laboratories in Illinois, is one of several scientists in the somewhat ambiguous posture of having ties to the task force without actually accepting membership in it. David told *Science* that he had not expressed a preference for either the Democratic or the Republican candidate and that, if he made any contribution to the Carter science policy task force, it would have to be in a way that would not involve him politically. "I'm not a member of any 'scientists and engineers for Carter,'" David said.

Several of the task force members can be regarded as part of the scientific "establishment" by virtue of their past or present positions in government, academe, or the National Academy of Sci-

ences (NAS). They include Harvey Brooks, who has been dean of engineering and applied physics at Harvard and a member of the President's Science Advisory Committee (PSAC) under presidents Eisenhower, Kennedy, and Johnson, and Harold Brown, formerly director of defense research and engineering and Secretary of the Air Force in the Kennedy and Johnson years. Others who may fall in this category are Ivan L. Bennett, Jr., formerly deputy director of the Office of Science and Technology under President Johnson, and Branscomb himself as a member of PSAC during Johnson's presidency.

William Bevan, a former executive

officer of the AAAS, is one of the few social scientists on the task force.

The task force appears to have no outspoken critics of the status quo. On it one finds no Theodore Roszak, author of *The Making of a Counter Culture* and *Where the Wasteland Ends*, and no Barry Commoner, critic of nuclear power and much else in the technological society.

But some unconventional and minority viewpoints are represented. For instance, Cecile Barker is a 32-year-old black who heads the OAO Corporation, an aerospace engineering firm in Beltsville, Maryland, which has emphasized minority hiring. Arthur H. Purcell, also 32, is the research director of the Techni-

Carter's Science Policy Task Force

Names of the 20 scientists who have thus far accepted membership on Jimmy Carter's Science Policy Task Force follow:

Lewis Branscomb (coordinator), vice president and chief scientist, IBM; **Harold Brown**, president of the California Institute of Technology; **Ivan L. Bennett, Jr.**, director of the New York University Medical Center; **Arthur H. Purcell**, vice president and research director of the Washington-based Technical Information Project, a public interest education and consulting group.

Harvey Brooks, professor of technology and public policy, Harvard University; **George Sponsler**, president of the International Planning Management Corporation, Bethesda, Maryland; **Cecile Barker**, president of the OAO Corporation, a small aerospace engineering firm in Beltsville, Maryland; **Dorothy Zinberg**, Program for Science and International Affairs, Harvard University; **Helen Whitely**, professor of microbiology, University of Washington; **Ray Bowers**, department of science, technology, and society, Cornell University; **Melvin Kranzberg**, professor of the history of technology, Georgia Institute of Technology.

Gilbert White, professor of geography and director of the Institute of Behavioral Science, University of Colorado; **David Baltimore** (Nobel laureate), professor of virology, Massachusetts Institute of Technology; **Leo Goldberg**, Aura Incorporated, Tucson, Arizona (Goldberg is also with the Kitt Peak National Observatory); **Michael Michaelis**, senior consultant on science and government, Arthur D. Little Company, Washington.

George Pake, director of research, Xerox Corporation, Palo Alto, California; **William Bevan**, professor of psychology, Duke University (Bevan is a former executive officer of the AAAS); **Walter Munk**, Scripps Institution of Oceanography, La Jolla, California; **Stephen H. Schneider**, National Center for Atmospheric Research, Boulder, Colorado; **George Low**, president of Rensselaer Polytechnic Institute and a former deputy administrator of the National Aeronautics and Space Administration.

Several other persons have been asked to join the task force but their acceptances are not in hand (some possibly will decline the appointment, while others apparently will wish to contribute advice without doing so as task force members). These scientists include **Edward David** (see story for his comments), former science adviser to President Nixon; **Aaron Gellman**, president of Gellman Research Associates, Inc., a consulting firm in Pennsylvania specializing in transportation economics and technology utilization; **Edwin H. Land**, president of the Polaroid Corporation, Cambridge, Massachusetts; **Mical Naftalin**, executive director of the National Research Council's Assembly of Engineering; **John Bardeen**, Nobel laureate in physics at the University of Illinois; and **Jerome Weisner**, president of the Massachusetts Institute of Technology.

*Three policy planning coordinators not identified above are:

Mathew Schaffer, who shares responsibility with Anthony Lake for foreign policy and international security. Schaffer, 28, is from Saint Simon Island, Georgia. He is a graduate of Yale, a Rhodes Scholar, and he holds a Ph.D. in social anthropology from Oxford University. He has been doing anthropological research in West Africa under the sponsorship of the National Geographic Society.

John Harmon, a coordinator with respect to policies affecting business and labor. Harmon, 32, is from Statesville, North Carolina, and is a graduate of the University of North Carolina and Duke University Law School. He has clerked for Chief Justice Warren E. Burger of the U.S. Supreme Court and for the late Justice Hugo Black. He has been practicing law with the Couderd Brothers in Paris, France.

Curt Hessler, co-ordinator with Harmon for business and labor policy. Hessler, 33, is a graduate of Harvard, a Rhodes Scholar, and he holds a master's degree in economics from the University of California at Berkeley, where he is a candidate for a doctorate. He also holds a law degree from Yale, and has clerked for Justice Potter Stewart of the U.S. Supreme Court and for Judge Shelly Wright of the U.S. Court of Appeals for the District of Columbia. He has been practicing law in Los Angeles.

cal Information Project in Washington, a public interest education and consulting organization specializing in resource conservation, technology assessment, and "life-style simplification." His group was begun as a sister organization to the Center for Science in the Public Interest, founded by several persons formerly associated with Ralph Nader.

Moreover, some younger scientists may be added to the task force who advocate counterculture ideas and the goal of making science and science policy more amenable to "the people" and popular control.

The word to have Branscomb head the task force came from the Carter organization in Atlanta, and originated with staff people close to Carter if not from the candidate himself. Branscomb has talked with Carter several times over the past few years, most recently in New York when Carter was there for the primary campaign. He first began contributing advice to Carter (whom he describes as "very, very intelligent") last November.

Final selection of the task force members was made by the Carter organization, but suggestions as to whom to appoint came from a variety of sources—from Branscomb, from scientific organizations such as the AAAS and the NAS, and from numerous individuals either taking part in or interested in the Carter campaign. Dennis Brezina, who came to the Carter organization from the defunct Fred Harris campaign and served as national task forces coordinator for a time, collaborated with Branscomb in actually putting the science policy task force together. Harry Schwartz, a Philadelphia attorney who at one time worked for former Senator Joseph Clark of Pennsylvania, succeeded Brezina in this capacity in early July, when the job of making up the task force was more or less completed.

A 50-year-old physicist, Branscomb now lives in Westchester County, New York, where IBM has its corporate headquarters. Much of his past professional career was spent with the National Bureau of Standards, which he directed from 1969 to 1972. His first job as task force coordinator will be to have the various members prepare informal position papers on issues such as federal support of academic science, the relationship of science and technology to economic growth (domestically and in the "Third World"), and opportunities for applying the social sciences to improving the operations of the Department of Health, Education, and Welfare. Branscomb communicates with the members by telephone and by mail. The task

force as a whole has never met and is not expected to.

The position papers are to go to Carter's issues staff in Atlanta before the start of the fall campaign on Labor Day. There, they will be handled in the first instance by Noel Sterrett, one of several "generalists" assigned to work on specific issues under the general supervision of Stuart Eizenstat, a 33-year-old Atlanta attorney. After carrying out this initial assignment, the science policy group, like the other task forces, may be asked for advice looking to the longer term, beyond election day.

Carter's task force on the environment is a direct offshoot of "Conservationists for Carter," a group headed by an Atlantan named Jane Yarn. It is made up solidly of environmentalists such as Eugene Odum, director of the Institute of Ecology at the University of Georgia; Kenneth Watt, professor of zoology at the University of California at Davis; J. G. Speth, an attorney with the Natural Resources Defense Council; Estella B. Leopold, now with the department of botany at the University of Washington; and Gordon MacDonald, a prominent geophysicist who served a few years on the Council on Environmental Quality and is now director of environmental studies at Dartmouth. Odum chaired a meeting of the task force held recently in Washington.

The energy task force is also an offshoot of Conservationists for Carter, but its membership—which has not been disclosed—is said to reflect a diversity of viewpoints. One of its members is Alvin Weinberg, former director of the Oak Ridge National Laboratory. The coordinator is Carlton Neville, a member of Carter's issues staff in Atlanta.

Coordinator of the task force on health is Mary King, who has a background as an activist in the civil rights movement and the Office of Economic Opportunity. Both she and her husband, Peter Bourne, a psychiatrist who was Georgia's director of mental health under Governor Carter, have been close friends and advisers to the candidate. Others who have been mentioned as members of the health task force include Harvey I. Sloane, mayor of Louisville, and William Roy, a physician and former member of Congress from Kansas.

The task force on education is chaired by William Friday, president of the University of North Carolina. Friday and another member, Samuel Halperin, director of the Institute for Educational Leadership at George Washington University and an HEW official during the Johnson Administration, were among

the visiting experts on social services who met with Carter at Plains on 16 August. Halperin, who had never met Carter before, was impressed. "He displayed an amazing knowledge of federal programs, and an impressive breadth of information and insight," Halperin says.

As in every presidential election year, there are many people eager to volunteer advice to the candidates whether they have been appointed to do so or not. Richard Rosen, a founder of Energy Resources Company, Inc., in Cambridge, Massachusetts, on 10 August brought together a meeting at the MIT faculty club of what had been described in his letters of invitation as "the Carter energy task force." Those present included several prominent academic economists, a former president of the Sierra Club, and the environmental adviser to the governor of Colorado. Some were puzzled at just what the tie was between the group and the Carter campaign, and justifiably so.

Schwartz, task forces coordinator, first told *Science* that, "As far as I know, he [Rosen] is someone operating out in left field without a mandate." But, then, after talking with Rosen and Eizenstat, Carter's issues chief in Atlanta, Schwartz said, "I told him we are compelled to regard his output as that of a self-starting group but that we are pleased to have it because his group includes some good names." Rosen says that his activities on behalf of the campaign were in fact solicited several months ago, but by persons no longer with the Carter organization. "Throughout this, I have acted in 100 percent good faith," he told *Science*.

—LUTHER J. CARTER

RECENT DEATHS

Carl B. Boyer, 69; professor and historian of mathematics, Brooklyn College; 26 April.

J. David Brilliant, 42; assistant professor of dentistry, Ohio State University; 8 February.

Welton J. Crook, 90; professor emeritus of metallurgy, Stanford University; 14 March.

Henrik Dam, 81; former head, biology department, Polytechnic Institute, Copenhagen; 17 April.

Robert E. Danielson, 44; professor of astrophysical sciences, Princeton University; 9 April.

Peter A. Herbut, 63; president, Thomas Jefferson University; 31 March.