Vice President Al Gore and other Washington science leaders discussed the future of federal support for science and technology at the 1996 annual meeting of the American Association for the Advancement of Science (AAAS) in Baltimore.

Gore and a "metaphor of distributed intelligence."

The White House sent Vice President Al Gore to discuss "What is the Role of Science in American Society," the first in a series of speeches to revive Gore's position as the administration's chief spokesperson for science. There have been complaints that the administration has neglected science in favor of technology.

Trying to answer his question, Gore propounded a new metaphor for American life. He noted that for a long time the metaphors of science, from Newtonian physics to Frederick Taylor's industrial science, migrated easily into the realm of political and economic affairs. The Vice President claimed this no longer occurs due to a disconnect between science and society. "As a result," Gore claimed, "the language we use to discuss problems is less vivid and less robust than it ought to be." He cited chaos theory, to help explain the economy, and evolution theory, for insight into social structures, as examples that have not entered the language of our discourse.

Gore enunciated what he called a new "metaphor of distributed intelligence." He developed this from the working of massive parallel computers that break up processing powers into many tiny processors that are then distributed throughout the field of memory. All of the processors begin working simultaneously, each performing its small part of the task, and sending its portion of the answer to be collated with the rest of the work that is going on. Gore declared this new metaphor "has enormous explanatory power," demonstrating, for example, why private sector organizations are shedding their middle layers and pushing power, information, and influence to frontline workers.

Gore noted recent attempts to undercut support for scientific understanding, saying a new vicious cycle of ignorance has arrived. He illustrated this with examples from recent Republican congressional remarks denigrating the ozone hole, the harmfulness of DDT, and the need for clean drinking water. The result, Gore exclaimed, has cheapened the discourse and is "the symptom of a deeper disregard for science itself..."

Once upon a time, the Vice President stated, there was a virtuous circle of science and success. "In this virtuous circle -- launched with bipartisan agreement--prosperity generated investment, investment generated answers, and answers generated further prosperity." Now with budget cuts and ignorance "that virtuous circle risks coming undone."

Most importantly, Gore concluded, "if we abandon our commitment to science, and fail to understand the power of distributed intelligence, this is what we risk losing -- the chaotic, convoluted, unpredictable breakthroughs that basic science produces." In order to avoid this, the Vice President called on the assembled scientists to "take up the call for knowledge," and "enlist in the army of persuasion whose battle cry says knowledge is important for knowledge's sake." Failure to make the case leads us down the path to "a know-nothing society -- a society..."
in which the storehouses of knowledge dwindle, the spigots of discovery are twisted and turned off, and missions of exploration are stalled on the ground." It is a society that "bases regulations on suspicions instead of science, says that DDT isn't harmful, and claims that global warming is the empirical equivalent of the Easter bunny."

Citing MIT President Chuck Vest, Gore noted that there are too many things we do not know, to take a chance on the know-nothing society. "We need to create a learning society, a society that harnesses the power of distributed intelligence and uses it to lift our lives," the Vice President concluded.

Once Again, Calls to Prioritize

A session on opening night featured Presidential Science Adviser Jack Gibbons, House Science Committee Chairman Robert Walker (R-PA), and Frank Press, former presidential science adviser and head of a National Academy of Sciences' Committee that produced Allocating Federal Funds for Science and Technology (see Update, December 4, 1995). Press described the report, whose major thrust was support for university based research and creation of a unified science budget that would remove the development portion--particularly as DOD defines it -- from the research and development budget.

After a tribute to Walker, who will retire after the current congressional session, Gibbons defended the administration's S&T policy, particularly its continued support, in the face of Republican efforts to eliminate it, the Department of Commerce's Advanced Technology Program. The administration continues to tout the results of economic research that demonstrate a 50 percent social return on the investment in basic research. Gibbons also quoted the study conducted by AAS that shows a decline of 30 percent in federal support for science over the next seven years under the Republicans balanced budget scenario. The science adviser took credit for the President's FY 1997 proposal (see Update, February 5) that included science and technology in the pantheon of programs that deserved protection from budget cuts in the discretionary spending part of the budget. Gibbons called for a balanced program of spending that will protect basic research, applied research and technological development. He noted that he expects when the details of the FY 1997 budget are released in March, NIH and NSF will receive increases.

Gibbons and Walker agreed with the Press report's stress on universities as the "foundation of our research system." They disagreed over the report's call for a diminished role for national laboratories. Gibbons suggested a need for continuing synergy between universities, the federal labs and industry. Walker agreed with Press on restricting the roles of the federal labs to "focus their work on the missions of the sponsoring agency... We can no longer afford to allow federal laboratories to go off in search of their own missions in order to justify their existence."

In other respects, Walker gave what amounted to the Republican response. He noted the GOP insistence on a plan to balance the budget and the impact it has had on science. He chastised scientists for, like all other interest groups, taking the "yes, but" approach to deficit reduction -- cut him but not me. This, he noted is an increasingly hard position to defend. Although research still enjoys bipartisan support in Congress and the public, for the most part, "it's no longer a blank check." Researchers, he noted, are increasingly called upon to justify their work and their results, and the competition among scientific fields is increasing.

As many other members of Congress have said over the years, Walker noted that he has urged the scientific community to come up with priorities for funding. Since, for the most part, the community
refuses, Congress must do the job and make what Walker kept referring to as "the hard choices."

He endorsed the idea of a comprehensive federal science and technology budget, but views it as undoable, especially in a Congress where science is spread among many committees. Although Walker has advocated a Department of Science to consolidate some federal S&T programs, that too does not appear to be immediately achievable. Walker suggested "it is a long term project" worth pursuing.

He also agreed with the Press report recommendation that "the federal government should encourage, but not directly fund, private sector technology development." Walker noted, that "the Science Committee has adopted as one of its precepts the idea that scarce federal resources should be concentrated on basic research activities rather than on programs which subsidize private sector technology development." The latter is not an appropriate role for the federal government, Walker declared.

Lane called the Press report a "good tool for evaluating science policy," and announced that the Science Committee will conduct a February 28 hearing on the study.

Lane Deplores Shutdown; Urges Civic Role for Scientists

National Science Foundation Director Neal Lane was also given an opportunity to implore scientists to take a more active role in civic life. Titling his remarks, "Science and the American Dream: Healthy or History," Lane noted that, historically, support and funding for American science has been generous. Now, however, he suggested, "science can only be funded if the electorate and their representatives remain convinced of its value and contribution (emphasis his).

Noting that the public's lack of understanding of science, "says more about us than about them," Lane urged scientists to routinize their efforts to explain to citizens and policymakers the goals and values of various investments the nation makes in science. As a product of academia, Lane understands the scientist's attributes of "curiosity, independence, desire for intellectual rigor, and an all consuming passion for discovery." But scientists must be able, however reluctantly, to deliver the message of the importance of scientific understanding. In citing examples of things to discuss with the public about how science translates into everyday life, he mentioned community policing.

Lane also asked whether scientists like the public? He cited Stephen Jay Gould's notion that the public is fascinated with science, although they may not entirely understand it. Urging scientists, to get off campus and speak to groups like Rotary Clubs, Lane granted that educating the nation about the value of science and technology will happen "slowly and imperceptibly at the grassroots." It is "not about staged visits to Washington representatives," he said, "but rather the collective influence of singular forays into local community life."

Citing his previous speech to the Astronomy Association in San Antonio a few weeks ago, Lane reiterated the perception in Congress of the science community's stony silence in the wake of major cuts in R&D. He acknowledge that "there were voices raised in concern," including the hard work of the many individuals who toil day in and day out to represent the interests of your institutions and professional societies. He also noted that selective voices from industry were heard. But the small, selective voices were drowned out in the noisy din, and because many policymakers take science and technology for granted, that sometimes they can become vulnerable quickly.

Thus, NSF does not have a full year FY 1996 budget yet and was forced to shutdown for three weeks. A senseless occurrence that, Lane noted, "demoralized our workforce, destroyed any efficient timetable for our already pressured work, forced continuing grants to run out of funds, caused substantial delays in funding new awards, and may cancel some new programs. He noted that NIH estimates the shutdown put them 6 to 8 months behind, "for NSF, it may be more."
**GOVERNMENT CLOSINGS LEAVE BACKLOG AT NIH**

Wendy Baldwin, Deputy Director for Extramural Research at the National Institutes of Health, recently updated several advisory councils on the lingering effects of the government shutdowns on the NIH extramural grant process.

Baldwin, speaking before the National Institute on Drug Abuse and National Institute on Nursing Research advisory council meetings, said it may take 6 to 9 months for the Extramural Office to recover from the closings.

Baldwin, detailing the events that led to the current crisis, said her office began FY 1996 below the FY 1994 funding level as a result of the continuing resolution (CR). In addition, as a result of a four and a half day shutdown, the decision was made to suspend the cost management plan, and 13,000 letters were mailed to grantees informing them of the decision. A second CR funded NIH at the FY 95 level for a two week period prior to the longest federal shutdown ever in the agency's history. In December alone the Extramural Office had a backlog of 2,000 grant applications. In January the backlog had grown to 4,000 applications and 3,000 summary statements were stuck in the system.

Committed to Seeing that Investigators are Not Harmed

Baldwin said her office is committed to seeing that investigators are not harmed by the shutdown and will take every step possible to prevent that from happening. Since reopening with its full year FY 1996 funding, a 5.7 percent increase over last year, NIH has resumed working under its plan which includes a modest 4 percent increase for continuing grants. Retroactive adjustments will be made to non-competing grants already awarded.

Baldwin is asking that grantees read the NIH home page (http://www.nih.gov) for information. In the "three weeks that NIH had been back at work since the shutdowns, hardworking staff had issued almost 1,700 awards for a total of over $394 million," Baldwin said.

**OFFUT TO HEAD ECONOMIC RESEARCH SERVICE**

Susan E. Offut was recently named Administrator of the Economic Research Service (ERS), a Department of Agriculture agency that provides economic and other social science information and analysis for public and private decisions on agriculture, food, natural resources, and rural America.

Prior to becoming Administrator, Offut was the Executive Director of the Board on Agriculture and Assistant Executive Officer at the National Research Council of the National Academy of Sciences. She has also served as the chief of the agricultural branch of the Office of Management and Budget, where she analyzed the 1990 farm bill.

A former assistant professor in the agricultural economics department at the University of Illinois, Offut received her Ph.D. from Cornell University.

**LESHNER TO IMPLEMENT B-START AT NIDA**

At a recent advisory council meeting of the National Institute on Drug Abuse (NIDA), Director Alan Leshner announced that NIDA is working to implement the B-START (Behavioral Science Track Award for Rapid Transition) program at the institute.

The B-START program supports behavioral science investigators at the beginning stages of their careers for small-scale, exploratory research projects in the areas of behavioral, social, and environmental factors in mental illness; biology; neuroscience; diagnosis, treatment, prevention and control of mental illness; and organization and financing of mental health services. Leshner was instrumental in implementing a similar program while at the National Institute of Mental Health (NIMH).

In addition, in its report accompanying the Labor, Health and Human Services appropriations bill the House Appropriations Committee encouraged NIMH "to maintain its support for the B-START program, both for those at the beginning stages of their career and for career transitions to behavioral science research."
WORKSHOP EXAMINES SOCIAL AND BEHAVIORAL BASE OF AIDS PREVENTION

Assessing the Social and Behavioral Science Base for HIV/AIDS Prevention and Intervention: Workshop Summary, reviews the results of a workshop convened by the Institute of Medicine (IOM) with the support from the Office of AIDS Research at the National Institutes of Health (NIH), targeting policymakers making the decisions for the HIV/AIDS research agenda in the next decade. Although the summary does not contain any formal recommendations, a major theme of the workshop was that programs designed to encourage and bolster the use of social and behavioral methods for research supported by the NIH, the Centers for Disease Control and Prevention (CDC), and other agencies will be "good investments for the future." A volume of background papers accompanies the report.

The workshop extended the review of preventive interventions targeted at individual behavior change found in the 1994 IOM report, AIDS and Behavior: An Integrated Approach. While the original project evaluated the balance between biomedical and behavioral research in the AIDS research programs at the National Institute of Mental Health, National Institute on Drug Abuse, and National Institute of Alcohol Abuse and Alcoholism, it did not review the broad social science base of behavior and how it relates to AIDS. Consisting of scientists, researchers, clinicians, and advocates workshop participants were tasked: "to consider the potential contributions of the social and behavioral science base for AIDS prevention, question the current understanding of the epidemic, draw new insights to help guide further research on complex issues, and to identify important research questions and relevant methodologies."

According to the summary, like the earlier report, efforts to prevent HIV/AIDS will require broader perspectives than those that have been applied in the past and the focus of research should not only include the natural course of the physical illness, but also include the social course of the disease. While it was beyond the scope of the workshop to provide a full description, summary, or assessment of all the many methodologies employed by social and behavioral researchers, the committee hopes that the summary will give readers concrete examples of how such methods can contribute to the design and implementation of prevention strategies by multidisciplinary research teams.

The participants discussed several prominent themes and research needs, noting:

- A clear gap exists between the tradition of clinical social science investigation and the need to see risk behaviors in a broad social, political, economic, and cultural context. Strategic planning could help determine the types of interdisciplinary collaborations that are required and methods to foster such collaborations.
- Social forces such as poverty, war, child abuse and many others must be taken into account when developing models for understanding the spread of HIV and developing preventive interventions.
- Efforts are needed to improve and expand behaviorally and socially based prevention interventions and to integrate them with biomedical interventions.
- The identification of subgroups that include demographic measures such as age, race, and gender, as well as measures regarding how people identify themselves with certain social networks and communities are needed to facilitate more strategic design of preventive interventions.
- HIV/AIDS preventive intervention research requires careful prior consideration and analysis of ethical conflicts and the development of adequate mechanisms for their adjudication.

Copies of the report can be obtained from the Institute of Medicine at (202) 334-2000.
BRITISH SOCIAL SCIENCE DEVELOPS THEMATIC PRIORITIES

The Economic and Social Research Council (ESRC) of Great Britain has issued a set of thematic priorities that will help it determine its support for research and training and enhance the United Kingdom's economic competitiveness, quality of life, and the effectiveness of its public services and policy. The ESRC is the United Kingdom's leading research and training agency addressing social and economic concerns. It is an independent organization established by Royal Charter and funded mainly by the government.

The nine themes resulted from consultation with the social science research community and users and beneficiaries of their research who were asked to identify both scientific opportunities and the U.K.'s long term knowledge requirements. The thematic approach will allow: the involvement of all social science disciplines; opportunities for collaboration with other scientific disciplines; perspectives from both the macro and micro level; historical, comparative and cultural dimensions; theoretical development; methodological improvements; and a global perspective. Over two-thirds of the ESRC's research and training budget will be spent on the nine themes, leaving one-third for research and graduate support not focused on the themes.

Theme 1 is Economic Performance and Development. Research issues include: economic growth, the role of markets, managing economic performance, and relating economic performance to society.

Environment and Sustainability is the second theme. Research issues include: defining sustainability; public attitudes about the environment; environmental policy; business and the environment; and environmental politics.

The third theme is Globalization, Regions and Emerging Markets. Research issues include: international economic integration, globalization, politics, and the nation state; and the emergence of a global culture.

Theme 4 is Government and Regulation. The research issues are: the changing role of governance; the changing nature of government; corporate governance; regulation and markets; and power, rights, and ethics. An overriding question for this theme is a governance and regulatory framework that adequately balances economic incentives with the protection of the wider public interest.

Human Communication and the Social Shaping of Technology is the fifth theme. Research issues include: the relationship between people and the new technology; implications for individuals; managing new technology growth; and the impact on social relationships. The key is to understand how new information and communication technologies are both shaped by human activities and have an impact on society and the individual.

The sixth theme is Innovation, Organizations and Business Processes. Research issues identified include: understanding innovation; organizational change; and new organizational structures and practices.

Theme seven is Knowledge and Skill. Research issues include: knowledge acquisition; managing knowledge; achieving a learning society; the impact of educational technology; and communicating and exchanging knowledge.

Lifespan, Lifestyles and Health is theme eight. Research issues include: understanding different phases of life; understanding different lifestyles such as work and leisure patterns; and examining the links to health and well-being of different status and behaviors.

The final theme is Social Integration and Exclusion. Research issues include: questions of social structure; social exclusion; the role of community; and changing values and identities. The goal is to understand social stability and the mechanisms whereby individuals are integrated into society, as well as to address the causes and implications of divisions within society.

For more information, contact Economic and Social Research Council, Polaris House, North Star Avenue, Swindon SN 2 1UJ, UNITED KINGDOM or e-mail: exrel@prime.esrc.ac.uk
SOURCES OF RESEARCH SUPPORT: VIOLENCE RESEARCH

COSSA provides this information as a service and encourages readers to contact the agency for further information or application materials. Additional application guidelines and restrictions may apply.

Research on Violence Against Women and Violence Within the Family

The National Institute of Justice (NIJ), the NIH Office of Behavioral and Social Science Research (OBSSR), the NIH Office of Research on Women's Health (ORWH), the National Institute on Drug Abuse (NIDA), the National Institute on Alcohol Abuse and Alcoholism (NIAAA), the National Institute on Mental Health (NIMH), the National Institute on Aging (NIA), the National Center on Child Abuse and Neglect (NCCAN), and the Centers for Disease Control and Prevention (CDC) invite applications for a three-year research grant program to conduct investigator-initiated research on the causes, course, treatment, management, and prevention of violence against women and violence within the family, as well as the health and legal consequences of this violence for victims.

These agencies are jointly issuing this Request for Applications (RFA) because violence against women and family violence are complex problems that are likely caused by a myriad of factors, including individual-, family-, and community-level elements. Thus, a research program to understand and address these problems must necessarily be interdisciplinary, drawing upon theories and approaches not normally found in a single agency. Gathering sufficient resources for such an approach requires a multi-agency investment. One of the goals of this RFA is to bring together perspectives of these different agencies, encompassing criminal justice, mental health, public health and prevention, alcohol and substance abuse, and child development perspectives, to advance our knowledge of violence against women and family violence.

Funding Mechanism: This RFA will use the National Institutes of Health Research Project Grant and Small Grant mechanisms.

Budget: The estimated total funds (direct and indirect costs) available for the first year of support for awards under this RFA will be $1,435,000. Five to seven awards are anticipated.

Deadline: The application receipt date is March 29, 1996.

Contact: Additional information regarding this RFA maybe obtained through the NIH Grant Line (data line 301-402-2221), the NIH GOPHER (gopher.nih.gov), and the NIH Website (http://www.nih.gov) or by mail and e-mail from the program contact listed below:

- Susan Solomon, OBSSR, NIH, Bldg. 1, Rm. 156 MSC 0155, Bethesda, MD 20857-0155, (301) 496-0979, fax: (301) 402-3469, Email: susan_solomon@nih.gov
- Bernard Auchtner, NIJ, 633 Indiana Avenue, NW, Washington, DC 20531, (202)307-0154, fax: (202) 307-6394, Email: auchtner@justice.usdoj.gov
- Katrina Johnson, Behavioral and Social Research, NIA, 7201 Wisconsin Avenue, Rm. 533 MSC 9205, Bethesda, MD 20892-9205, (301) 402-4156, fax: (301) 402-0051, Email: Katrina_Johnson@nih.gov
- Susan E. Martin, Preventional Research Branch, NIAAA, 6000 Executive Blvd., Suite 505, Rockville, MD 20892, (301) 443-8767, fax: (301) 443-8774, Email: smartin@willco.niaaa.nih.gov
- Donald Vereen, Jr., NIDA, 5600 Fishers Lane, Rm. 10-05, Rockville, MD 20857, (301) 443-6480, fax: (301) 443-9127, Email: dvereen@aodaa2.ssw.dhhs.gov
- Chester Pogostin, Division of Violence Prevention, National Center for Injury Prevention and Control, CDC, 4770 Buford Hwy., NE, Mailstop K60, Atlanta, GA 30341, (404) 488-4410, fax: (404) 488-4349, Email: CLP3@CIPCQD1.EM.CDC.GOV
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