After 18 years as a member of the House Science Committee, Rep. Sherwood Boehlert (R-NY) has finally ascended to the pinnacle of power on the panel. Boehlert is one of the leaders of the moderate House Republicans and a strong supporter of science, particularly its education component. He is expected to inspire greater bipartisanship and harmony in the Committee than existed under its past two leaders, former Rep. Robert Walker and Rep. James Sensenbrenner (R-WI). Rep. Ralph Hall (D-TX) will remain as the Ranking Democrat.

In a speech to the Universities Research Association on January 31, the new chairman outlined his priorities for the committee. Boehlert declared, “I intend to concentrate initially on three priorities — science and math education, energy policy, and the environment — three areas in which the resources and expertise of the scientific enterprise must be brought to bear on issues of national significance.” He expressed some skepticism about the recent mania for testing students. He noted, “... the wrong kinds of tests will not only mask evidence of a continuing decline; they could contribute to it.” He also called for closer relationships between universities and our nation’s school systems. In the environmental area, Boehlert wants the Committee “to be a central forum to learn about the science behind ongoing... controversies in environmental policy,” such as global climate change and biotechnology.

He also intends to focus on the health of the nation’s research enterprise, most particularly by taking “a serious look at the balance within the federal research portfolio.” Although the National Institutes of Health is not formally within the jurisdiction of the Science Committee, Boehlert raised a number of questions about NIH’s capacity to cope with its ever-expanding budget. He also expressed the need to ask tough questions about proposals to double the entire science budget. As he has for many years, Boehlert also stated his concern about the changing nature of the nation’s universities, such as their increasing partnerships with industry and the relationship between research and teaching.

The Committee announced its Subcommittee lineup on February 7. Rep. Nick Smith (R-MI) will remain as head of the Research Subcommittee (formerly Basic Research), which has jurisdiction over NSF. Rep. Eddie Bernice Johnson (D-TX) will also remain as the Ranking Democrat.

Rep. Dana Rohrabacher will continue to lead the Space and Aeronautics Subcommittee, which has jurisdiction over NASA and the Federal Aviation Administration (FAA). Rep. Bart Gordon (D-TN) will be the Ranking Democrat. Rep. Vern Ehlers (D-MI), a physicist, will head a new Subcommittee on Environment, Technology, and Standards, which will have jurisdiction over EPA, NOAA, and the National Institute of Standards and Technology. Rep. James Barcia (D-MI) will be the Ranking Democrat. Rep. Roscoe Bartlett (R-MD), a Ph.D. engineer, will head the panel on Energy, where Rep. Lynn Woolsey (D-CA) will lead the Democrats.

Finally, David Goldston, who has spoken to the COSSA Annual Meeting on multiple occasions, was named Staff Director for the Science Committee.

Inside UPDATE...

- Demographers Called Before Senate to Guide Fiscal Policy
- OBSSR Invites Comments on Draft Research Agenda
- IOM Calls for New Era of Research at NIH
- Children and Computer Technology: Help Wanted
- Using Research to Close the Achievement Gap
- COSSA’s Staff Grows
- Sources of Research Support
DEMOGRAPHERS CALLED BEFORE SENATE TO GUIDE FISCAL POLICY

The Senate Budget Committee called four leading demographers and economists to the Hill to testify on the impact of demographic trends on the budget and long-term fiscal policy. The knowledgeable researchers brought social science and a long-term perspective to the debate on tax cuts and the solvency of entitlement programs.

The Committee is in need of demographic and economic expertise in light of two factors: the expected large budget surpluses for the next several years and the near-certain trend towards the draining of entitlement funds as baby boomers retire and life expectancy rises. Although the scientists had different prescriptions for how to deal with these trends, they all agreed that the aging of the U.S. population is a problem that must be addressed now.

Ronald Lee, Professor of Demography and Economics at the University of California at Berkeley, explained that federal expenditures on the elderly, which are now eight percent of GDP, will nearly triple to 23 percent of GDP by 2075. Speculating on the potential for increased immigration to solve the problem, Lee explained that while the average immigrant has a beneficial impact on the Federal budget, the additional 5 million immigrants per year over 75 years that would be required to bring Social Security into balance is not feasible.

Robert Friedland, Director of the American Enterprise Institute, similarly sought ways to pay more into entitlement programs in the future. Focusing on the worldwide decline in birthrates, Wattenberg recommended government support of "pronatalist" policies. Such policies, like the newly-enacted $500 per child tax credit, could encourage young couples who are reluctant to have children to do so, thereby boosting the size of the workforce and the payments to entitlement programs.

In reaction, Senator Robert Byrd (D-WV) expressed his skepticism at the impact of such incentives on the birthrate. Parents are discouraged by the rising costs of such things as education and health care, he explained in a detailed anecdote.

Finally, Peter Orszag, President of the policy consulting firm Sebago Associates, focused on the budget surplus, suggesting the importance of national saving to reducing the burden of future entitlement payouts. Since using budget surpluses to pay down the national debt would eliminate it entirely within ten years, further national saving would require investment in private assets. While acknowledging the potential dangers of government
investment in private assets, Orszag concluded that the costs of not saving are more significant.

Senators Olympia Snowe (R-ME) and Ranking Member Kent Conrad (D-SD) sought explicit confirmation of their respective parties' positions. Snowe received Orszag's endorsement of investing public funds in the stock market and Conrad received strong affirmation from three of the witnesses that trust fund surpluses should be protected.

New member Sen. Hillary Clinton (D-NY) added her observations, expressing her appreciation of the witnesses' attention to family-friendly policies and seeking and receiving affirmation from Orszag that programs like Head Start do have significant positive effects on these long term problems.

**OBSSR INVITES COMMENTS ON DRAFT RESEARCH AGENDA**

The National Institutes of Health (NIH) Office of Behavioral and Social Sciences (OBSSR) is seeking comments on a draft research agenda designed to stimulate research on the social and cultural dimensions of health. The agenda results from the widely noted conference, *Toward Higher Levels of Analysis: Progress and Promise in Research on Social and Cultural Dimensions of Health*, held June 27 - 29, 2000 on the NIH campus (see Update, July 10 and 24, 2000). The draft agenda is available online at [http://obssr.od.nih.gov/](http://obssr.od.nih.gov/). There will be a 30-day comment period.

The first-ever trans-NIH conference, designed to highlight social science contributions to the study of health, complemented several ongoing initiatives at NIH, most importantly the initiative to reduce health disparities (see Update, November 6, 2000). Nine hundred people attended.

The first two days of the conference featured presentations by eminent social scientists on topics ranging from the measurement of race and ethnicity to the provision of effective mental health treatment. Sessions covered several major areas: basic research on sociocultural constructs, sociocultural processes and health, interpersonal, neighborhood, and community processes involved in the etiology of health, sociocultural processes in prevention and treatment, health services and service seeking, global perspectives on health, and health justice and ethics.

On the third day, a group of 60 scholars met to develop recommendations for a research agenda that would advance research on social and cultural aspects of health. Six working groups addressed directions for social and cultural research on 1) the etiology of health and illness; 2) prevention; 3) treatment and services; 4) consequences of illness; 5) methodology; and 6) basic constructs and processes. The groups produced a volume of recommendations to inform the future development of social science research on health.

Since last June, conference co-chairs Christine Bachrach of the National Institute of Child Health and Human Development and David Takeuchi of Indiana University have been working with the planning committee, Office of Behavioral and Social Sciences Research staff, and other participants in preparing the agenda for social and cultural research at NIH.

**IOM CALLS FOR NEW ERA OF RESEARCH AT NIH**

An Institute of Medicine (IOM) Report, *New Horizons in Health: An Integrative Approach*, calls for a new era of research and practice at the National Institutes of Health (NIH) that integrates biomedical and social-behavioral fields of inquiry to promote the nation's health. Recognizing that "there still remains significant distance to travel in the journey toward optimal distance, the central message of the report is that behavioral and psychosocial processes have broader significance and are fundamental to a comprehensive understanding of disease etiology as well as to the promotion of health and well-being.

"The horizon before us is one in which health encompasses not only the workings of biology, brain, and body but also the human mind, its thoughts and feelings, human actions and behavior, as well as the nature of social ties, friendships, family, and community life," the report emphasizes.

The Committee on Future Directions for Behavioral and Social Sciences Research at NIH, created under the Board on Behavioral, Cognitive, and Sensory Sciences at the National Research Council, was established via the request of the NIH's Office of Behavioral and Social Sciences Research (OBSSR). Its purpose was to evaluate the potential contributions of behavioral and social
science research to the mission of NIH and to develop research priorities that support and complement the work of the institutes.

The report identifies a broad domain of questions at the intersection of social, behavioral, and biomedical sciences, the resolution of which could lead to major improvements in health. Emphasizing priorities that cut across Institute boundaries, the committee underscored the broad significance of behavioral and social science research for multiple disease outcomes as well as for health promotion. Greater integration of health research and practice across these broad domains, they remarked, is essential to implement the committee’s recommendations.

The committee developed ten thematic priorities, with an overarching theme focused on the multiple pathways to diverse health outcomes. “The mechanisms underlying racial, ethnic, and social inequalities in health . . . cannot be fully understood without integrated pathway characterizations,” notes the report.

Thematic Areas

1. Predisease pathways — identify early and long-term biological, behavioral, psychological, and social precursors to disease. These include a broad array of factors that affect the individual from conception (or before) through development and adulthood.

2. Positive health — identify biological, behavioral, and psychological factors that contribute to resilience, disease resistance, and wellness. The committee emphasizes that positive health includes not only the absence of illness but also the presence of wellness.

NIH is to encouraged to:

- establish new priorities focused on the etiology (at genetic, behavioral, environmental levels) of disease resistance, particularly in contexts of known risks;
- increase the support for the study of the protective resources (optimism, meaning and purpose, social and emotional support, and related neurobiological mechanisms) that promote recovery and increased survival rates;
- initiate new investigations that will advance knowledge of resilience in the face of life adversity, giving particular emphasis to longitudinal studies.

3. Gene expression — understand environmentally-induced gene expression and its connection to positive and negative health outcomes. The report recommends that NIH support integrative research aimed at understanding the role of environmentally induced gene expression in disease etiology and the promotion of health.

4. Personal ties — explicate the mechanisms by which proximal social interactions influence health and disease outcomes. There is a large body of epidemiological findings that document the links between social relationships and mental and physical health outcomes, including mortality.

The committee recommends that studies of the links between the social world and health should focus on the underlying and causal mechanisms in both animals and humans. Such work would include:

- investigations that assess how social ties influence health practices and behaviors;
- longitudinal studies that link cumulative social relational profiles with cumulative biological profiles; and
- multilevel, integrative studies working at the intersection of social interaction, emotion, and brain activity and downstream endocrinological and immunological processes.

5. Healthy communities — identify the collective properties of social and physical environments that influence health and disease outcomes. Research shows that even when individual attributes and behaviors are taken into account, there are further influences on health outcomes following from collective community properties. Social processes in the collective sources of influence that require investigation include such phenomena as social cohesion, subcultures of violence, and informal social controls.

6. Inequality and health outcomes — clarify the mechanisms through which socioeconomic hierarchies, racism, discrimination, and stigmatization influence health and disease
outcomes. The report emphasizes that programs of study are needed on the role of socioeconomic hierarchies in predisease pathways, which encompass behavioral, psychosocial, and environmental factors as well as underlying biological mechanisms.

The committee also notes that disparities in health following from ethnic/racial status and related experiences of discrimination, racism, and stigmatization must be key priorities under the broader rubric of social inequalities.

7. Population health — understand macro-level trends in health status and evaluate performance of health care systems. The report cites the need for multilevel analyses that link population health dynamics to behavioral, psychosocial, and environmental factors (at both individual and intermediate levels of aggregation).

Four population issues are emphasized: 1) time trends and spatial variation in population health; 2) accounting for such trends, with particular emphasis given to social and behavioral factors; 3) understanding the linkages between the macro economy and population health; and 4) evaluating the health care system. An important cross-cutting issue between these topics and the preceding priorities, notes the report, is the need for multilevel analyses that link population health dynamics to behavioral, psychosocial, and environmental factors.

8. Interventions — expand the scope and effectiveness of strategies for social and behavioral interventions to improve health. The report notes that while interventions have been widely implemented that have emphasized behavioral and social factors designed to decrease behaviors associated with health risk (e.g., alcohol or substance abuse, smoking) or to increase behaviors associated with health promotion (e.g., exercise, dietary practices), programs focused on family and social network interventions are less extensive. Interventions targeted at multiple levels (e.g., individual, family, organizational, population) as well as to large segments of the population (not just high-risk groups).

9. Methodology — develop new measurement techniques and study designs to link information across levels of analysis (molecular, cellular, behavioral, psychosocial, community) and across time. The report stresses that to "advance priorities on predisease pathways and positive health, it is critically important to conduct longitudinal studies that measure multiple domains (e.g., behavioral, psychological, social, environmental) across time (e.g., early life influences, childhood and adolescence, adulthood, and old age).

10. Infrastructure — establish ways to maintain long-term study populations and to train scientists to integrate health-related knowledge across multiple disciplines. The New Horizons report emphasizes that the multidisciplinary nature of all of the thematic priorities in the report underscore a "critical and pervasive need for training initiatives," to nurture, support, and sustain hybrid careers that transcend current disciplinary boundaries. Success in the integrative studies central to this report will require a new cadre of scientists skilled in working across social, behavioral, and biomedical levels of analysis.

The executive summary to the New Horizons report can be found on the OBSSR's website: http://obssr.od.nih.gov/Publications/NRC_Horizons.htm.

CHILDREN AND COMPUTER TECHNOLOGY: HELP WANTED

The National Academy of Sciences' Board on Children, Youth, and Families convened a workshop entitled, Children and Computer Technology in Washington. The workshop brought together researchers, educators, policymakers, and other key stakeholders to examine a range of issues related to the role of computers in children's lives. Sponsored by the David and Lucile Packard Foundation, the discussions revealed the need for social and behavioral studies in this field.

Ellen Wartella of the University of Texas at Austin placed the issues in a historical context, comparing today's attention to the impact of computers with past discussions on the potential harms of radio, television, and other media. However, what distinguishes computers and the internet from previous media innovations, Wartella conceded, is the interactivity associated with this one. We don't know much about the impact this new media will have on our children; we do know, she qualified, that children tend to be early, frequent, and heavy users of new technologies.
The research presented by the speakers addressed such issues as the effects of computers and the internet on children's social well-being, cognitive skills, psychological, neural, and social development, physical health, and academic achievement. The common thread running through all of the presentations was the emphasis that the widespread use of this technology is still relatively new and that associated research is still in its infancy.

Unfortunately, according to Joseph Turow of the University of Pennsylvania, much of what we as a society do know about the impacts of computers and technology we learn from popular and trade magazines. These sources, he said, tend to reflect the agendas of the industry and marketers. As a result, the content is generally not in-depth, nor is it contextualized in the scientific literature. The public needs information that encourages reflection and civic participation, Turow asserted, rather than hyperconnectivity and consumerism.

To that end, many of the presenters discussed specific research needs that will help society to discern the effects of computers and the internet on children and guide a more informed use of the new technology.

Specifically, the presenters called for more research into: how computers are being used in formal (classroom) and informal settings; how to measure computer literacy; appropriate classroom environments to facilitate effective use of computer technology; how to encourage the treatment of children as active learners rather than consumers on the internet; the implications of the interactivity aspect of computers and the internet; how to successfully marry the new technology to quality content, teaching, and implementation; the impact of interactive games on cognition; the impact of internet communication on social development; the impact of computers at home and at school on academic performance; what computers can do that has not yet been done; what children are and should be learning; the effects of long-term exposure to computer screens; neurological, social, and psychological development at various ages; and the effects of early use of software and "edutainment" on cognitive skills, to name a few.

All this is not easy, commented Barbara Means of SRI International. Technology, she said, is like a moving target. However, the research base can and should be strengthened, Means continued, and rigor and scalability should be pursued.

Unfortunately, lamented Jeremy Roschelle of SRI International, policy-relevant research is currently under-funded. Linda Roberts from the Department of Education agreed: "It is essential that there be a policy and research agenda in this country." The alternative, she said, is missed opportunities to use the technology effectively and increasing inequities in access.

In related news, Rep. Fred Upton (R-MI), the new chairman of the House Energy and Commerce Telecommunications Subcommittee, conveyed in a letter to President Bush his desire to enhance funding for the Education Department to study ways technology can boost student performance and establish an education and technology clearinghouse.

**USING RESEARCH TO CLOSE THE ACHIEVEMENT GAP**

"The civil rights issue of today is education." This was the opening message of Benno Schmidt, founder of Edison Schools, at the Brookings Institution's conference on Closing the Gap: Promising Approaches to Reducing the Achievement Gap. Schmidt concluded that there are research-based remedies for the achievement gap, and the research is encouraging, particularly if what is known is applied systematically.

The achievement gap refers to the disparity in academic achievement between white and African-American and other minority children. While there was hope that this gap would be eliminated soon after school desegregation was ordered in 1954, there has been little change since the 1970s when African-American and Latino students made significant gains. If minority students performed at the same level as whites, many believe, there would be profound impacts on the socioeconomic status of minorities, college admissions, segregation, prejudice, and racial tension.

There is no consensus on the best way to improve the quality of education minorities achieve, especially given the political nature of policy remedies. However, the scientists at the conference presented some solid evidence in support of certain policies to reduce the gap.
Alan Krueger and Diane Whitmore of Princeton University looked at evidence on class size and student achievement. They found, consistent with the literature, that smaller class size does improve achievement. For some reason, African-Americans have benefited more than other racial groups from smaller class size over the last 30 years.

The discussants advanced a number of theories to explain why smaller classes are beneficial as well as why they are more effective for only one racial group. The uncertainty about why these effects are seen points to the need for more research; however given the observed benefits, reduced class size "doesn't look too bad" compared to other strategies.

David Grissmer and Ann Flanagan of the RAND Institute investigated the role of federal resources in closing the achievement gap. They conclude that there is compelling evidence that federal resources affects achievement. They pointed to three "critical and arguably efficient federal roles": addressing interstate inequality, increasing the quality of teachers and better distributing quality teachers, and improving R&D.

In the ensuing discussion, Tom Toch of Brookings' Brown Center on Education Policy concluded that money makes a difference, and targeted spending can make a big difference. This conclusion may call into question President Bush’s proposal to give "chunks of money [block grants] to the states to spend as they please."

Paul Peterson of Harvard University and William Howell of the University of Wisconsin at Madison considered the effects of vouchers for private schools on student achievement. Looking at three experiments conducted in New York, Dayton, and Washington, employing parental surveys, student surveys, and test scores, they observed a differential impact of voucher intervention – African-Americans benefit, but whites do not (there is no good data for Latinos). They mentioned three theories that try to explain why private schools are more successful: 1) they are in competition with public schools; 2) religious schools create community and develop social capital; and 3) faith-based education is more effective. As with reducing class size, however, explanations for the racial differential in effectiveness are still largely speculative.

COSSA’S STAFF GROWS

COSSA is pleased to announce the appointment of John Wertman as Assistant Director for Government Relations. He will assist COSSA’s lobbying efforts, provide research support, and manage the office.

Wertman recently spent 18 months as a White House Aide in President Clinton’s Correspondence Office. He previously held internships in the White House Office of Political Affairs, the Leadership Office of House Minority Leader Richard Gephardt (D-MO), and the office of Congressman Tom Davis (R-VA). Wertman received a B.A. in Government from the University of Virginia.

SOURCES OF RESEARCH SUPPORT

NSF Seeks Biocomplexity Proposals

The National Science Foundation (NSF) has announced a special competition on Biocomplexity in the Environment: Integrated Research and Education in Environmental Systems. Biocomplexity investigations are intended to provide a more complete understanding of natural processes, human behaviors and decisions in the natural world, and ways to use new technology effectively to observe the environment and sustain species diversity.

One part of the solicitation is called Dynamics of Coupled Natural and Human Systems (CNH). Proposals in this area are due March 16, 2001. CNH emphasizes quantitative understanding of the short- and long-term dynamics of natural capital and how humans value and influence ecosystem services and natural resources, including consideration of landscapes and land use and the influences on societal institutions of uncertainty, resilience, and vulnerability in complex environmental systems. “Natural capital” refers to both tangible goods, such as food and fuel, and less tangible services, such as water purification and erosion control, that are provided by functioning ecosystems.

Three integrative elements – quantitative elements, education, and global perspective – must be included, and interdisciplinarity is required. NSF expects to make 110 awards: 70 for projects and 40 for exploratory, conference, or planning activities. For further information go to: www.geo.nsf.gov/bi-01.htm#cnh or contact Thomas Baerwald at 703/292-8740 or tbaerwal@nsf.gov.

There are also sections titled MEMBERS, AFFILIATES, and CONTRIBUTORS, listing additional organizations and institutions.

Lastly, there is a section for Consortium of Social Science Associations, listing various universities and research institutions.