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# CONGRESSMAN BAIRD DISCUSSES SOCIAL SCIENCES AND CONGRESS AT HSD MEETING

Speaking to a meeting of principal investigators from the National Science Foundation's (NSF) Human and Social Dynamics priority (HSD) on October 2, Rep. Brian Baird (D-WA) asserted that the "social sciences have more immediate relevance to America's problems" than the other sciences. The Chairman of the House Basic Research and Science Education Subcommittee contended that America's grand challenges in national security, health care, energy, and the environment need more social science research.

In 2007, Baird has successfully defended attacks on individual peer-reviewed NSF grants on the House floor (see Update May 14, 2007) and insisted on language in the COMPETES conference report that includes the social sciences in a list of NSF priorities (see Update August 6, 2007). He referred to his recent hearing (see below) in which social scientists described how their research has identified small changes in human behavior that would have an enormous impact on energy usage. "We must apply ourselves to studying behavior," he declared, as well as learning more about how to convey messages that will lead to changes in that behavior.

In discussing the politics of social science funding, Baird noted that while he "respects the peer review process immensely," there are some grants that are difficult to defend. Reminding the audience that his constituency in Southwest Washington State includes many loggers and fishermen, researchers he said, need to "title their studies well" and defend the relevance of their studies to the nation. Congress is quite rightly, the guardian of the taxpayer's dollars, he argued.

He praised Speaker Nancy Pelosi (D-CA), House Science Committee Chairman Bart Gordon (D-TN), and his Subcommittee's Ranking Republican, Rep. Vern Ehlers (R-MI), for their commitment to science and innovation. The recently enacted COMPETES legislation was an important step for improvements in science and technology education and American competitiveness, Baird pointed out.

Looking to the future Baird expects to have more hearings on the contributions of social science research to America's Grand Challenges and a hearing examining the peer review process since, as he noted, "it is not perfect."

Responding to a question from COSSA Executive Director Howard Silver, Baird suggested that the view of the social sciences on Capitol Hill is mostly "clueless." He is doing his best to change that!

#### **HSD Research Presented**

In addition to hearing from Baird, the meeting presented the results of some of the research funded under the HSD priority. HSD has been funding grants since its first solicitation in 2004. It will have one more competition in 2008. The grants are multidisciplinary and include teams of researchers.

Steve Ruggles of the University of Minnesota described his project on *International Integrated Microdata Series*, which is compiling the world's largest public-use census database. So far, the research team has processed 80 datasets from 26 countries, containing the individual-level census responses of 202 million persons. The data spans the period 1960 to the present. In 2007 samples were added from Argentina, Hungary, Israel, the Palestinian Territories, Portugal and Rwanda. More information and the datasets can be found at: <a href="http://www.ipums.umn.edu">http://www.ipums.umn.edu</a>.

COSSA President Susan Cutter continues her HSD-funded research on *The Recovery Divide: Socialspatial Disparities in Disaster Recovery from Hurricane Katrina along Missisisippi's Gulf Coast.* She is interested in how Katrina will change the demographic face of the Gulf Coast and whether the social transformation of the landscape post disaster follows the same social and economic trajectory pre-disaster or does the extreme event change this?

Harry Yeh of Oregon State University presented a summary of his team's research on *Community Risk Management of Hurricane and Tsunami Surge Hazards*. Yeh is developing a comprehensive scenario simulator for these hazards that integrates models of surge impact, warning transmission, decision-making, evacuation behavior, and evaluation of casualties and damages. Interestingly, Yeh is conducting some of his research off the Washington state coast, part of Rep. Baird's congressional district.

Other projects on display at the meeting were: understanding Non-Governmental Organizations (NGO) as agents of change (Margaret Hermann, Syracuse University), the dynamics of civil war outcomes (John O'Loughlin, University of Colorado, Boulder), financial markets as a way to study the ecology of human decision making (Doyne Farmer, Sante Fe Institute), children and technology (Linda Jackson, Michigan State University), the dynamics of political rhetoric and representation (Burt Monroe, Penn State), and temporal effects in word recognition and word learning (Delphine Dahan, University of Pennsylvania).

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### NEW FISCAL YEAR BEGINS: APPROPRIATIONS REMAIN STALLED

Fiscal year (FY) 2008 began on October 1, 2007 without any of the 12 appropriations bills enacted into law. This forced Congress, as it has done many times in recent years, to pass a Continuing Resolution (CR) to keep government agencies and programs running through November 16. The CR funds these agencies and programs at FY 2007 levels.

So far, the House has passed all its spending bills, but the Senate has enacted only five. While much of the delay is the usual slowdown in Senate consideration of these bills, this year's process has been affected by the White House threat to veto many of them including those that fund the National Science Foundation, the National Institutes of Health, the U.S. Census Bureau, the National Institute of Justice and the Bureau of Justice Statistics, and other research and statistical agencies. The Democratic Congressional leadership is trying to figure out a strategy to get the bills passed and signed by the President in some reasonable manner. The presidential objection to the overall spending level, \$23 billion above his requested amount, may seem like small potatoes in an almost \$3 trillion budget, but symbolic politics, as political scientist Murray Edelman noted many years ago, sometimes trumps rational decision-making.

While the CR creates hardships for many agencies, the U.S. Census Bureau finds itself in more difficulty than many. The Bureau has the all-important dress rehearsal for the 2010 count scheduled for next year. As part of re-inventing the Census, e.g., no long form, the Bureau expects to buy hand-held computer devices to facilitate non-response follow-up. This equipment needs testing in next year's dress rehearsal. Without the significant increase proposed in the Census' FY 2008 budget, buying, let alone using these devices, would become difficult if the CR gets extended much beyond November 16.

Although the Congressional leadership hopes to finish the FY 2008 appropriations process by the expiration of the current CR, this now appears highly unlikely.

# HOUSE SCIENCE PANEL HEARS SOCIAL/BEHAVIORAL SCIENCES' CONTRIBUTION TO ENERGY CHALLENGE

On September 25, 2007, the Subcommittee on Research and Science Education of the House Committee on Science and Technology, chaired by Rep. Brian Baird (D-WA), held a hearing to examine how research in the social sciences, including the behavioral and economic sciences, contributes to the design, implementation and evaluation of effective policies for energy conservation and efficiency. The hearing was attended by all five Ph.D.s on the Subcommittee: Baird (psychology), the panel's Ranking Republican Rep. Vern Ehlers (R-MI) (physics), Rep. Dan Lipinski (D-IL) (political science), Rep. Jerry McNerney (D-CA) (mathematics), and Rep. Roscoe Bartlett (R-MD) (human physiology).

The hearing's purpose was to explore research results that could help policy makers understand why people's attitudes about energy don't translate into action. The hearing charter stated that "while it may be impossible to quantify, individual and collective behavior play an important role, not just through direct use of energy, but also by creating or failing to create market demand for more energy efficient technologies."



Cialdini, Wegener, Laitner, Ellig and Bordley

Based on data collected by the Energy Information Administration in 2005, U.S. households consumed 21 quadrillion BTUs of primary energy, accounting for 21 percent of total U.S. energy consumption. In 2003, a survey commissioned by the Alliance to Save Energy found that a majority of consumers, 92 percent, believe that business, government, and consumers have an equal responsibility to reduce energy use. However, these attitudes have not translated into action. The majority of Americans, despite concern for both the environment and rising prices, don't consider energy usage in their own behavior. Baird posited, "Imagine if every American decided to turn off their lights when they left a room, shut down their computers at night, or looked for an EnergyStar label the next time they shopped for a major appliance?"

"What if energy was purple?" Ehlers told during the hearing that if energy was purple people would change their behavior, because they would see how much energy they use. They would see purple energy leaking from their poorly insulated homes and see that the Prius would generate a little purple haze while the SUV would become enveloped in a big purple cloud.

Knowing how to effectively create and communicate a message to your audience is an important part of any campaign, and social and behavioral science can play a role in helping to tailor the right message. Robert Cialdini, a psychologist at Arizona State University, testified that we've been sending the wrong message. Instead of encouraging people to reduce their energy consumption, the messages used have been having the opposite effect. "When communicating with the public, it is important to avoid trying to reduce the incidence of a damaging problem by describing it as regrettably frequent. Such an approach, while understandable, runs counter to the findings of social science regarding the contagiousness of social behavior, even socially harmful behavior. Instead, it would be better to honestly inform our audience of the environmental peril resulting from even a small amount of the undesirable conduct," said Cialdini. He gave the example of a better way to encourage hotel guests not to change towels and linens each day.

Duane Wegener, a psychologist at Purdue University, addressed behavior change through research on attitudes, persuasion, and behavior. At the Purdue Energy Center, Wegener and his colleagues focus on social, economic, political, and policy factors that potentially influence behavioral patterns. He remarked that "by integrating social science with technology development, we believe that new technologies can come online faster and more smoothly." He suggested, however, that at its current levels federal funding remains insufficient to support research addressing behavioral pathways.

Ehlers asked the witnesses what role the federal government should play in influencing society regarding energy usage? Wegener, echoing the sentiments of his fellow witnesses, replied that the federal government needs to increase investment in basic research, which could provide tools to allow companies and individuals to develop products and get them to the market.

Energy efficiency and responsibility are not just a matter of economics, of what consumers or businesses find cheaper. Yet economic models, which often rely on the "rational man" hypothesis, fail to account for those other decision making factors, according to John Laitner, an economist at the American Council for an Energy Efficient Economy. He testified that, "for the most part, current economic policy models fail to adequately capture the ways in which individual energy consumption patterns change in response to both economic and non-economic policies and programs." He contended that economic models underestimate the energy savings, while overestimating the costs of energy efficiency. Consumers, Laitner suggested, are making their energy choices not simply based on prices, but based on a complex mix of motivating factors that vary from individual to individual.

Regarding the Subcommittee's interest in how to get people of their SUVs and into hybrid, fuel saving vehicles, Robert Bordley, a former program officer for NSF's Decision, Risk, and Management Science program and now a Technical Fellow in the General Motors Vehicle Development Research Laboratory, testified how his company uses social science research. Bordley cited the work of Nobel Prize winners Daniel Kahneman and Dan McFadden and National Medal of Science winner Duncan Luce as influencing how GM understands consumer preferences in vehicle buying decisions. He also suggested that GM is very interested in examining the influence of the Internet on automobile purchases.

Unusual for hearings these days the Representatives and witnesses all agreed on the importance of social science research, and not only regarding energy policies. "Policy changes at best affect some of the knowledge flows and incentives people face. Social science research bridges the gap between policy and actual outcomes by

examining how knowledge flows and incentives change human behavior. Without social science, achieving the desired outcome is really a shot in the dark," said Jerry Ellig, an economist with the Mercatus Center at George Mason University.

Baird commented there is a need to convey the importance of social science research. "When the topic of social sciences comes up, there are always vocal skeptics - those who may acknowledge the intellectual merit of the research, but have trouble making the connection to areas of national need and question why the federal government should be supporting social science research in the face of so many competing demands for those dollars."

Since the 1980s, funding for non-economic social science research on energy consumption has declined dramatically. More funding is necessary in order to expand understanding of the social dynamics of energy consumption, energy conservation, and energy efficiency. Notably, given the topic of this hearing, the Department of Energy's Office of Science claims not to spend any funds on social science research.

# THE COSTS OF MASS INCARCERATION EXAMINED BY CONGRESSIONAL PANEL

"The fact is that almost all the extant research points out that our prison system is too big, too expensive, drains funds away from other essential areas that can more effectively increase public safety, and is harmful to our poorest communities," Michael Jacobson, Director of the Vera Institute of Justice, told the Congressional Joint Economic Committee (JEC) on October 4. Yet, Jacobson went on: "Despite all this research, however, we continue to imprison more and more people."

The hearing, "Mass Incarceration in the United States: At What Cost," was chaired by Sen. James Webb (D-VA). It discussed all the usual data points:

- 2.1 million Americans are in federal, state, and local prisons and jails. As Rep. Bobby Scott (D-VA) pointed out, the average U.S incarceration rate is over seven times the international average.
- More than 7 million Americans are under some form of correction supervision, including probation and parole;
- State, local, and federal governments spend more than \$200 billion on law enforcement and corrections personnel. According to JEC Vice-Chair Rep. Carolyn Maloney (D-NY), the average annual cost for one federal prisoner exceeds \$20,000, more than the average annual cost for a youth program (\$3,700), a job training program (\$6,000) or tuition at a public university (\$13,000).
- A black male who does not finish high school has a 60 percent chance of going to jail. As Bruce Western of Harvard remarked, "For young black male dropouts, prison time has become a normal life event." As Webb noted, "We have reached a point where the principal nexus between young African-American men and our society is increasingly the criminal justice system."

How did this happen? Why has, as Glenn Loury of Brown University declared to the Committee, "the American prison system... grown into a leviathan unmatched in human history." Loury's answer is the "so-called War on Drugs." He noted that "blacks were twice as likely as whites to be arrested for a drug offense in 1975, but four-times as likely by 1989." In addition, in the 1990s, Loury continued, "drug arrests remained at historically unprecedented levels." This was at a time, he pointed out, when the National Survey on Drug Abuse indicated that drug use was declining.

Scott blamed "tough-on-crime" politics. "Under the get-tough approach, no matter how tough you were last year, you have to get tougher this year," he declared. Jacobson, who was New York City's Correction Commissioner from 1995-98, agreed with Scott on the political angle, but also noted that there are a host of other reasons: "the attraction of prisons as engines of economic development for rural communities; the financial incentives for public employee as unions as well as for the private prison industry in more spending on prisons; and the realities of the budget process and constrained budgets that limit opportunities to make substantial investments in new initiatives."

What are its impacts? The consequences of such a large prison population start with recidivism. According to Jacobson, more than half of those leaving prison are back in within three years. Why? Western presented some economic data: youths detained in correctional facilities before age 20 have higher unemployment and receive lower wages long after incarceration; prison-leavers have little schooling and erratic work histories; "criminal stigma," not only includes social sanctions, but legal ones as well, as employment in certain industries and occupations remains barred; and returning prisoners are highly concentrated in poor urban neighborhoods, which leads to "the economic penalties of incarceration now permeate the most economically vulnerable families and communities."

What to do? Scott argued for raising high school graduation rates, utilizing neighborhood-based law enforcement initiatives, and increasing employment and wages. Western called for re-examination of policies limiting exprisoners access to educational, welfare, and housing benefits, suggesting they should have time limits. He also indicated that community based re-entry programs that are integrated with education and other programs in prison, and also provide housing, drug treatment, and health care improve the job readiness of released-prisoners. Finally, Western argued for the "establishment of criminal justice social impact panels in local jurisdictions that can evaluate unwarranted disparities in juvenile and adult incarceration."

The witnesses and the members of the JEC urged the enactment of the Second Chance Act, also known as the Community Safety Through Recidivism Prevention Act of 2007. The legislation would provide for new and innovative programs to improve offender reentry services, enhanced drug treatment and mentoring grant programs, and require the National Institute of Justice and the Bureau of Justice Statistics to conduct research on juvenile and adult offender reentry. Both the House and Senate Judiciary Committees have reported versions of the bill, but no floor action has occurred.

## NATIONAL CHILDREN'S STUDY ANNOUNCES THE SELECTION OF 22 NEW CENTERS

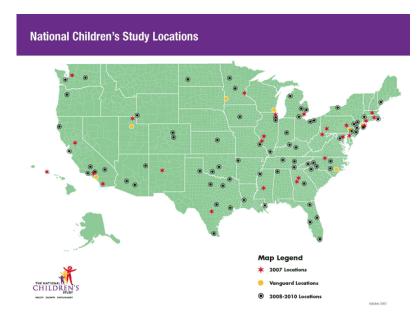
On October 4, the newly created Congressional Children's Study Working Group, along with Duane Alexander, Director of the National Institute of Child Health and Human Development (NICHD) and Peter Scheidt, Director of the National Children's Study (NCS), announced the project's expansion with the selection of 22 additional study centers to join the vanguard centers selected in October 2005.

"Today's announcement represents a milestone for the National Children's Study," said Alexander. "The addition of new study centers will move the study closer to its goal of recruiting more than 100,000 children representative of the entire population of American children," he said.

The Children's Study Working Group, created by Reps. Doris Matsui (D-CA) and Christopher Smith (R-NJ), will advocate for NCS in Congress, keeping Members updated on the status, needs, and successes of the NCS. "There has been an alarming trend of diseases and conditions affecting our nation's youth in recent years. By investing in research now, we can help to make sure that the next generation of American kids grows up healthier than the last," said Matsui.

Smith stressed that, "Good policy flows from good and accurate data and in 2000 we created the National Children's Study as a first critical step towards identifying, promoting, and implementing reforms needed to improve the health and well being of America's children. Our bipartisan Children's Study Working Group will focus attention and amplify the findings and recommendations of the National Children's Study so that policy changes are made and our children are better protected from dangerous environmental and health risks."

NCS is the largest longitudinal long-term study of environmental and genetic effects on children's health ever conducted in the United States. The study defines "environment" broadly and will take a number of issues into account, including: natural and man-made environment factors, biological and chemical factors, physical surroundings, social factors, behavioral influences and outcomes, genetics, cultural and family influences and differences, and geographic locations. It will follow 100,000 children from before birth to age 21. Researchers hope to better understand how children's genes and their environments interact to affect their health and development.



The 22 new study centers will manage the operations in 26 of the 105 previously designated study locations, which are in 20 states. Pending additional funding, the NCS will eventually be conducted in all 105 study locations across the United States, in both urban and rural areas. All were selected using a probability-based method to ensure that children and families across the nation—from diverse ethnic, racial, economic, religious, geographic, and social groups—are fairly represented in the study.

In FY 2007 and again in FY 2008, the President's proposed budget eliminated funding for the study. In FY 2007, Congress appropriated \$69 million for the study, allowing the NCS to fund the new centers and step up recruitment activities at the vanguard centers (See Update, October 10, 2005). For

FY 2008, both the full House and the Senate Appropriations Committee provided the \$110 million in funding needed to continue the study (See Update, <u>June 11, 2007</u> and <u>June 25, 2007</u>).

The NCS is led by the U.S. Department of Health and Human Services -- through the National Institutes of Health and the Centers for Disease Control and Prevention -- and by the U.S. Environmental Protection Agency. For information on the National Children's Study visit their site more web at http://www.nationalchildrensstudy.gov/. For a list of the study centers see http://nationalchildrensstudy.gov/study\_centers/upload/Study\_Centers.pdf.

# BEA AND NSF ESTIMATE R&D CONTRIBUTION TO GROSS DOMESTIC PRODUCT

The inclusion of research and development (R&D) expenditures as investments for determining Gross Domestic Product (GDP) is an ongoing activity that both the Bureau of Economic Analysis (BEA) and the National Science Foundation's (NSF) Science, Resources Statistics Division (SRS), have jointly worked on for a number of years. The BEA FY 2008 budget request includes enhanced funds for further work on how spending on R&D affects U.S. GDP.

On September 28, BEA and SRS announced that GDP would have increased nearly three percent higher each year between 1959 and 2004--\$284 billion higher in 2004 alone--if R&D spending was treated as investment in the U.S. national income and product accounts.

In 2004, the two agencies entered into a multiyear agreement to use the information from SRS' R&D expenditure data collection to produce an R&D satellite account – a supplemental set of data that can be factored into economic measurements to determine the impact of this spending by various organizations on U.S. growth and productivity. Using these data, BEA developed estimates of R&D investment and the resulting macroeconomic effects, and first released the results under this agreement in 2006.

The 2007 R&D satellite account updates the 2006 BEA estimates of the effect of R&D on economic growth. It extends the data to 2004, incorporates methodology improvements and presents for the first time industrial and regional details and the role of multinational corporations (MNCs). Major findings include:

• R&D accounts for five percent of real GDP growth between 1959 and 2004, and seven percent between 1995 and 2004. This ramp-up in R&D's contribution helps explain the pick-up in economic growth and productivity since 1995.

- Information, communication, and technology (ICT) and biotechnology-related industries account for two-thirds of the business sector's R&D contribution to GDP growth between 1995 and 2004.
- Recognizing R&D as investment boosts the level of state GDP the most in New Mexico (8.2 percent) and in Maryland (6.2 percent) between 1998 and 2002.
- In 2004, the value added of majority-owned foreign affiliates of U.S. MNCs rises by \$26 billion, or 3.1 percent, with R&D capitalization. The value added of majority-owned U.S. affiliates of foreign MNCs rises by \$28 billion, or 5.5 percent. For U.S. parent companies, value added rises by \$148 billion, or 6.7 percent.

More detailed information about the 2007 R&D accounts is available on the BEA Web site, <a href="http://www.bea.gov/">http://www.bea.gov/</a>.

# DEPARTMENT OF HEALTH AND HUMAN SERVICES RELEASES REPORT ON PERSONALIZED HEALTH CARE

The Department of Health and Human Services (HHS) released its first report on *Personalized Health Care: Opportunities, Pathways, Resources* at the end of September. The report was initiated by Secretary of HHS Michael Leavitt who notes in the forward that the opportunities that exist as the result of the progress made by American medicine and the potential power of networked information "hold the possibility of a transformation over the coming years and decades that is even more far-reaching. It involves not only breakthroughs in scientific knowledge, but, equally important, the application of this knowledge on a patient-by-patient basis."

According to the Secretary, "personalized health care is information-based health care." The report, notes Leavitt, is an "early 'reconnoitering,' a glimpse from the perspective of the Department of Health and Human Services of the work that lies ahead to achieve personalized health care." Leavitt emphasizes that important "crosscutting social, legal, and technical issues which are prerequisites for achieving personalized health care." These challenges include the issues of: public trust, genetic and molecular research, translation of knowledge into clinical practice, new processes and relationships in product development, and health information technology and knowledge management.

A copy of the report is available at: <a href="http://www.hhs.gov/myhealthcare/news/phc-report.pdf">http://www.hhs.gov/myhealthcare/news/phc-report.pdf</a>.

# PRESIDENT'S CANCER PANEL MAKES RECOMMENDATIONS FOR PROMOTING ADOPTION OF HEALTHY BEHAVIORS

After spending a year examining how lifestyle affects cancer risk, and the concrete actions that governments, communities, and individuals can take to reduce that risk through lifestyle changes, the President's Cancer Panel recently released its 2006-2007 Annual Report, *Promoting Healthy Lifestyles: Policy, Program, and Personal Recommendations for Reducing Cancer Risk.* The Panel focused on obesity and tobacco use and environmental tobacco smoke exposure. It identified key policy, industry, and cultural barriers preventing "the public from receiving the information and interventions necessary to make healthy choices and thereby reduce their cancer risk."

Established in 1971, the Panel is charged to monitor and appraise the development and execution of the National Cancer Program and report directly to the President regarding barriers or impediments to the "fullest and most rapid execution of the Program." It meets not less than four times a year and reports its findings annually.

The Panel noted that over the past several years it has become increasingly concerned about the growing evidence linking the risk for numerous cancers with various aspects of lifestyle. It determined that a review of the scientific evidence and the status of public policy and programs addressing the relationships between lifestyle and cancer were warranted. The Panel chose as its focus the potential for cancer risk reduction that could be achieved through changes in diet, nutrition, physical activity, and tobacco use and smoke exposure.

"Most of the federally-sponsored cancer prevention research underway or planned emphasizes exploring genetic and /or molecular biologic indicators or predictors (markers) of cancer, metabolic pathways, and possible

interventions (e.g., preventive agents) to interrupt the multi-step cancer development process before invasive disease occurs," the report proclaimed. Recognizing that while this work is important, the Panel indicated this approach "ignores the macroenvironment and the physical, social, and cultural contexts within which food choices, opportunities for physical activity, and tobacco use and smoke exposure occur." It also emphasizes that "In the more immediate term, the principal causes of lung and numerous other cancers are amenable to change through behavioral and policy/environmental interventions, which offer the best chance of substantially reducing the burden."

### **Overarching Recommendations**

The Panel's report has three overarching recommendations:

- 1. Elected officials, policymakers, and institutions have a moral obligation to protect the public's health; they must assert their collective political will to change policies contributing to the obesity epidemic and continued tobacco use, both of which result in increased cancer risk and incidence.
- 2. The health care community (i.e., researchers, providers, and advocates) must coordinate and integrate education and prevention strategies related to diet, nutrition, physical activity, and tobacco use and exposure with other diseases (e.g., diabetes, heart disease) to make the most of available resources and to simplify and harmonize the common risk reduction messages. The health care community also has an important role in advocating for policy changes and funding to support necessary research related to lifestyle factors and cancer.
- 3. Individuals to the best of their ability must assume personal responsibility for learning about cancer risks associated with obesity and tobacco use in order to make healthy lifestyle choices for themselves and their families.

#### **Continued Research Needs**

The Panel's report stresses that "specific cross-cutting research needs remain." Behavior change -- both its dynamics and how to achieve it long term at both individual and population levels -- is among the most important of the research needs. A better understanding of the mechanisms that support individual behavior and culture change is needed to inform related health services research -- evaluation of existing and new physical activity and nutrition interventions, data collection, studies of the economic savings achieved by companies to implement workplace wellness programs.

The report also recognizes that behavioral research will inform and improve research and practice in health communications to the population in general, and to the populations of special vulnerability, such as cancer survivors, youth, women, minorities, and immigrants. Finally, the report notes that **policy research** is required to ascertain how policy can best stimulate and reinforce interventions to encourage lifestyle choices that reduce cancer risk.

Specific cross-cutting areas of research needs cited in the report include:

- Interrelationships of multiple lifestyle factors and the dynamics and mechanisms of achieving/maintaining behavioral change in individuals and populations.
- The impact of poverty, gender, and race/ethnicity across the life span to support interventions development and reduce health disparities.
- Policy-related interventions that would improve the effectiveness of programmatic or therapeutic interventions.
- Data collection to document health status improvements and cost savings due to lifestyle behavioral interventions.

Areas of research surrounding diet, nutrition, and physical activity that need expanding include:

- Mechanisms of food addiction and possible parallels to other addictions.
- The relationship between socioeconomic position and obesity.

- The impact of the built environment on physical activity.
- Intervention studies to inform prediction of the impact of physical activity on cancer risk.
- Tools for measuring diet, physical activity, and obesity (e.g., BMI).

Research needs surrounding tobacco use prevention and treatment, environmental tobacco smoke exposure cited in the report includes:

- Communication interventions to further strengthen public attitudes that smoking is unacceptable.
- The dynamics and mechanisms of behavior change relevant to tobacco use prevention and cessation, including studies specific to particularly vulnerable populations such as the poor, ethnic/racial minorities, individuals with low literacy levels, persons with mental illness and/or addictions, active military and veterans, cancer survivors, and individuals with co-morbid conditions.
- How current and emerging communications technologies can be used to reduce the exposure to medical images of smoking and other detrimental lifestyle behaviors.
- Policy-related interventions that would improve the effectiveness of tobacco control interventions.

The President's Cancer Panel members are: LaSalle Leffall, the Charles R. Drew Professor of Surgery, Howard University College of Medicine in Washington, DC, and Chairman of the Board of the Susan G. Komen Breast Cancer Foundation; Lance Armstrong, a champion cyclist, three-time Olympian, seven-time winner of the Tour de France, and a cancer survivor; and Margaret L. Kripke, Professor of Immunology and Executive Vice President and Chief Academic Officer of The University of Texas M.D. Anderson Cancer Center.

For additional information on the Panel or to download a copy of the report see <a href="http://pcp.cancer.gov">http://pcp.cancer.gov</a>.

# NSF SEEKS APPLICATIONS FOR MULTIDISCIPLINARY COMPUTATIONAL THINKING INITIATIVE

One of the new initiatives in the National Science Foundation's (NSF) FY 2008 proposed budget is a multidisciplinary, multiyear effort called Cyber-Enabled Discovery and Innovation (CDI). The Foundation has now announced its solicitation for CDI projects to advance innovative computational thinking.

According to NSF, the newest CDI research outcomes will produce paradigm shifts in our understanding of a wide range of science and engineering phenomena and socio-technical innovations that create new wealth and enhance the national quality of life.

In FY 2008, NSF hopes to invest \$52 million in CDI. The Foundation expects the commitment to grow by \$50 million in each of the next five years. With this investment, NSF wants researchers to create revolutionary science and engineering research outcomes made possible by innovations and advances in "computational thinking," defined comprehensively as computational concepts, methods, models, algorithms, and tools.

Speaking at a symposium at Rensselaer Polytechnic Institute, NSF Director Arden Bement noted: "With CDI, we will enhance our support for projects such as these that seek to analyze massive, complex collections of data." He also noted: "CDI will broaden the Nation's capability for innovation by developing the computationally-based concepts and tools we need to exploit complex, data-rich and interacting systems."

Commenting further, Bement suggested: "CDI can only succeed through partnerships. The most successful partnerships will include a large diversity of skills - with the core science disciplines and computational science converging. They will require mathematicians, decision scientists, and information theorists working together. We will see collaborations among biologists, computer scientists, and sociologists."

In the current solicitation, CDI seeks ambitious, transformative, multidisciplinary research proposals within or across the following three thematic areas:

From data to knowledge: enhancing human understanding and generating new knowledge from a wealth
of heterogeneous digital data;

- Understanding complexity in natural, built, and social systems: deriving fundamental insights on systems comprising multiple interacting elements; and
- **Building virtual organizations**: enhancing discovery and innovation by bringing people and resources together across institutional, geographical and cultural boundaries.
- According to NSF, a competitive CDI proposal will:
- Describe an ambitious research and/or education agenda that, through computational thinking, promises paradigm-shifting advances in more than one field of science or engineering;
- Provide a compelling rationale for how innovations in, and/or innovative use of, computational thinking will yield the desired project outcomes; and
- Draw on productive intellectual partnerships that capitalize on synergies of knowledge and expertise in multiple fields or sub-fields of science or engineering, and/or in multiple types of organizations, including foreign and domestic academic, for-profit, and not-for-profit entities.

Letters of Intent are required and are due between October 30 and November 30, 2007. For additional information about CDI, please visit <a href="http://www.nsf.gov/crssprgm/cdi/index.jsp">http://www.nsf.gov/crssprgm/cdi/index.jsp</a>. For the full solicitation go to: <a href="http://www.nsf.gov/pubs/2007/nsf07603/nsf07603.pdf">http://www.nsf.gov/pubs/2007/nsf07603/nsf07603.pdf</a>

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### RESEARCH ON RESEARCH INTEGRITY: APPLICATIONS WANTED

Recognizing that multiple factors influence integrity, the National Institutes of Health's (NIH) National Center for Research Resources (NCRR), Office of Research Integrity (ORI), National Institute of General Medical Sciences (NIGMS) and the National Cancer Institute (NCI) are seeking applications proposing exploratory research on research integrity and have issued a request-for-applications (RFA-RR-07-003).

The RFA's sponsors note that while a great deal has been written about integrity in research and its importance; published research data are lacking in four significant areas:

- 1. The standards that guide responsible practice in a community, how they are set, and the extent to which the community of researchers routinely adheres to these standards;
- 2. The effectiveness of professional self-regulation in research;
- 3. The factors that influence students, researchers and research institutions to adhere to or deviate from their norms of integrity in research and how these factors can be reinforced or modified to promote responsible practices; and
- 4. The economic, policy, and intellectual impacts of behaviors that fail to adhere to rules, regulations, guidelines, and commonly accepted professional codes or norms.

The sponsors note that the goals of NIH-supported research are to advance the understanding of biological systems, improve the control of disease, and enhance health. This goal is compromised by behaviors that contravene rules, regulations, guidelines, and commonly accepted professional codes of norms. They are interested in identifying the economic, policy, and scientific impacts of research misconduct and questionable research practices.

Proposals must challenge existing paradigms, and be developed around an innovative hypothesis or address critical barriers to progress in understanding the multiple factors that underlie deviation from research integrity. The sponsors are particularly interested in research that will provide clear evidence of problem areas in community standards, self-regulation, practice norms, and non-adherence to accepted codes of conduct.

Relevance to health science research, including, for example, those biomedical, behavioral health sciences, or health services research areas having particular positive or negative research issues is required. Relevant research perspectives and disciplines include: anthropology, applied philosophy, biomedical informatics, business, economics, education, information studies, law, organizational studies, health services, political science, psychology, public health, sociology, and survey and evaluation research, plus the physical, biomedical, and clinical sciences.

Letters of intent are due by October 20, 2007. Applications may be submitted on or after October 20, 2007. For more information go to: http://grants.nih.gov/grants/rfa-files/RFA-RR-07-003.html.

# NIH INSTITUTES SEEK APPLICATIONS FOR GENOMICS RESEARCH INCLUDING POPULATION AND ELSI ISSUES

The National Human Genome Research Institute (NHGRI), along with the National Institute of Deafness and Other Communication Disorders (NIDCD), the National Institute of Dental and Craniofacial Research (NIDCR), and the National Institute of Mental Health (NIMH) are seeking applications for research (PA-07-458) related to genomics, including analysis of genome structure and function, genetic variation, population genomics, and ELSI (ethical, legal, and social implications).

The initial objectives of the Human Genome Project (HGP) were achieved at least two years ahead of schedule. In April 2003, NHGRI published its latest planning process in a document entitled "A Vision for the Future of Genomics Research" (http://www.genome.gov/11007524). That document outlined three areas that need addressing "to make use of the immense potential inherent in knowledge of the complete DNA sequence of the human genome to be applied for the improvement of human health and well-being." These areas include:

- 1. Elucidating the structure and function of genomes;
- 2. Translating genome-based knowledge into health benefits; and
- 3. Promoting the use of genomics to maximize benefits and minimize harms.

The latter area relates closely to NHGRI's ELSI program. The research topics encompassed by the ELSI area have traditionally been included in separate funding announcements. But given the "growing interrelatedness of genomics to research in humans and to applications to in health care and other settings, it has become increasingly clear that the investigation of ELSI issues cannot be separated from the genomic research that generate these issues." Areas of high interest for investigator-initiated applications include: Technology and Methods Development, Bioinformatics, Computational Biology, Population Genomics, and Ethical, Legal, and Social Implications.

Population Genomics is an emerging discipline that applies genomic technologies, such as genome-wide association testing and sequencing, to population studies to identify gene regions, genes, or variants affecting common etiologically complex conditions and predict individual risk. It also investigates the value of applying genomic methods in clinical care for the diagnosis, treatment, and prevention of complex diseases. The research scope of Population Genomics at NHGRI include: developing resources and statistical methods for observational studies and clinical trials incorporating advanced genomic technologies; conducting proof-of-principle studies that apply genomic technologies to particular conditions that can be generalized to a broader range of conditions; and developing research methods and infrastructure needed for future epidemiologic studies of genetic and environmental contribution to disease in the U.S., including a large, prospective cohort study of genes and environment.

In the area of ELSI research, NHGRI supports studies that examine issues and, where appropriate, develop policy options in the following areas: 1) the translation of genomic information to improved human health; 2) the conduct of genomic research—particularly genome-wide association studies, medical sequencing and clinical studies; 3) intellectual property issues surrounding access to and use of genomic information; 4) the use of genomic information and technologies in non-health care settings; 5) the impact of genomics on concepts of race, ethnicity, kinship and individual and group identity; 6) the implications, for both individuals and society, of uncovering genetic contributions not only to disease but also to 'normal' human traits and behaviors; and 7) how different individuals, cultures, and religious traditions view the ethical boundaries for the uses of genetics and genomics. The Institute emphasizes that several of these topics are closely integrated with genomic research, which is why they are described in this funding announcement.

Applications may be submitted on or after September 30, 2007. For more information go to: <a href="http://grants.nih.gov/grants/quide/pa-files/PA-07-458.html">http://grants.nih.gov/grants/quide/pa-files/PA-07-458.html</a>

### Feasibility Studies to Develop Technology and Methods

To support feasibility studies to conduct innovative high risk/high payoff research related to genomics, the above institutes have also issued an announcement (PA-07-459) intended to encourage new exploratory and developmental research projects. The studies may involve considerable risk but may lead to a breakthrough in a particular area, or to the development of novel techniques, agents, methodologies, models, or applications that could have a major impact on a field of biomedical, behavioral, or clinical research.

This funding opportunity runs in parallel with the announcement (PA-07-458) above. The total project period for an application submitted in response to the announcement may not exceed two years. Direct costs are limited to \$300,000, with no more than \$200,000 in direct costs allowed in any single year.

For more information go to: <a href="http://grants.nih.gov/grants/guide/pa-files/PA-07-459.html">http://grants.nih.gov/grants/guide/pa-files/PA-07-459.html</a>.

### NINDS SEEKS DIVERSITY RESEARCH EDUCATION GRANTS IN NEUROSCIENCE

The National Institute on Neurological Disorders and Stroke (NINDS) invite applications for diversity education grants whose goals are to support the development and/or implementation of programs as it relates to increasing the number of Ph.D.-level diversity research scientists, advancing diversity trainees to the next step in their education, and the value-added of scientific enrichment within the NINDS mission. The NINDS Research Education grant is a flexible and specialized mechanism designed to foster the development of neuroscience researchers through creative and innovative educational programs. Programs that focus on preparing diversity researchers in cross-disciplinary integration of neuroscience, including basic, translational, behavioral, prevention, clinical, and treatment research are encouraged.

The Institute is particularly interested in educational experiences that will attract, train, and further the career development of underrepresented biomedical scientists to improve the diversity of the research workforce relevant to the mission of NINDS.

Programs may be local, regional, or national in scope. Formats for these programs may also vary. Proposed research education programs may complement other, ongoing research training and education occurring at an applicant institution, but the proposed educational experience must be distinct from those research training and research education programs currently receiving federal support. For more information see <a href="http://grants.nih.gov/grants/guide/pa-files/PAR-07-456.html">http://grants.nih.gov/grants/guide/pa-files/PAR-07-456.html</a>.

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The Consortium of Social Science Associations (COSSA) is an advocacy organization promoting attention to and federal support for the social and behavioral sciences.

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### **GOVERNING MEMBERS**

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