MCQUEARY TESTIFIES TO HOMELAND SECURITY SCIENCE SUBCOMMITTEE


Subcommittee Chairman Mac Thornberry (R-TX) noted in his opening statement that “the United States is the world leader in the development of science and technology. I believe this leadership role will help make us more secure in the future.” He posited that one of McQueary’s biggest challenges will be to set up a framework that will enable us to research the best and most important ideas and topics quickly.

McQueary explained that the Science and Technology (S&T) Directorate’s work will complement the efforts of the other DHS directorates. S&T currently has 50 employees, but there is approval for 79 full time equivalent positions (FTEs) in the FY 2003 appropriation and the FY 2004 budget calls for 180 FTEs. The Directorate has taken its initial guidance from the President’s homeland security strategy and is also looking to supplement that framework.

In response to concerns expressed by some of the subcommittee members, McQueary indicated that he is committed to avoiding overlap between the S&T Directorate and other Federal research agencies. He specifically mentioned that he plans to meet quarterly with Paul McHale, Assistant Secretary of Defense for Homeland (Continued on Next Page)

HOMELAND SECURITY RESEARCH IN THE SOCIAL AND BEHAVIORAL SCIENCES

At a recent meeting at the White House Office of Science and Technology Policy (OSTP), Parney Albright, a high-ranking Administration official, outlined a social and behavioral sciences research agenda for the Department of Homeland Security (DHS).

Admitting that the DHS Science and Technology Directorate was mainly focused on research to protect against radiological, nuclear, biological, and chemical attacks, he did note that not much of the $803 million FY 2004 proposed budget would go to social/behavioral research. At the same time however, according to Albright, the social and behavioral sciences cross cut everything in the new Department. (Continued on Next Page)
MCQUEARY, (Continued from Page 1)

Defense, regarding potential for collaboration. McQueary also asserted that S&T will focus on ways to encourage American students to study and develop specialty in science and technology fields. The Directorate’s fellowship programs (see Update, April 28, 2003) are the first step in this direction.

Rep. Dave Camp (R-MI) and Del. Donna Christian-Christensen (D-VI) both asked McQueary to discuss his plans for the Department’s university centers of excellence. The Undersecretary noted that no final decisions have been made, but there will be more than one and fewer than ten. He also told Thornberry that he hopes to have the Homeland Security Institute (a separate, entity from the university centers) up and running by November. The university centers will focus on a broad range of homeland security mission areas, including training and education, whereas the Institute will focus primarily on analysis, evaluation, and assessment.

There was an extended discussion about the Directorate’s mission, both in the short and long term. Thornberry and Rep. Sherwood Boehlert (R-NY), a member of the panel and also Chairman of the House Science Committee, asked McQueary to discuss his plans and goals for research. McQueary explained that his immediate focus is on selected priority areas dictated by threat assessments. Once these pressing items have been dealt with, the S&T leadership will turn its attention to basic research and long-term priorities. RFPs will be issued as a means of seeking out the best ideas.

No decision has been made as to whether the Homeland Security Committee will be continued in subsequent Congresses. A key problem deals with jurisdictional issues. For background on McQueary, see Update, January 13, 2003.

SOCIAL/BEHAVIORAL RESEARCH,
(Continued from Page 1)

DHS is interested in learning “how to determine intent” of people crossing borders, boarding airplanes, and other places where possible terrorists might be located. Presently, DHS has anecdotal stories from the Secret Service, police officers, border officials, and others, which focus on “hunches” as a method of identifying potentially dangerous people. DHS is spending $15 million in FY 2003 and plans to spend up to $25 million in FY 2004 to try and discover a more systematic way to conduct these searches without tolerating too many false alarms. Departmental officials would like to know if there is a way to determine intent by focusing on certain behavior traits?

Also on the agenda is more work on the “root causes of terrorism” and ascertaining “levers” to diminish motivation. Topics include: Is there a way to make deterrence effective? and What are the links or differences between criminal activity and terrorism?

How to train people and get them to respond to terrorist warnings is another piece of the Department’s research agenda. Citing experiments in occupied Germany after World War II, Albright admitted this has been difficult to accomplish. He noted how people tend to ignore fire alarms believing they are only drills. Are responses to terrorist warnings different from how people react to know natural hazards such as hurricanes, tornadoes, and earthquakes?

Finally, can DHS learn about terrorist networks by studying criminal networks? Since both networks often rely on trust, according to Albright, are similar disruption techniques useful in both cases? At an earlier National Research Council Committee on Law and Justice Roundtable on Terrorism there was some skepticism expressed about the usefulness of this comparison (see Update, January 13, 2003).

Albright also mentioned the use of data mining techniques, cultural knowledge, and domestic terrorist groups as other items for investigation by social/behavioral scientists that would be helpful to DHS.

Albright currently serves as Assistant Director for National and Homeland Security at OSTP. President Bush recently announced that he intends to nominate Albright to be Assistant Secretary of DHS for Plans, Programs and Budgets. He will face Senate Confirmation before assuming this position.

ACADEMY ROUNDTABLE FOCUSES ON SCREENING FOR TERRORISTS

With the nation back on Code Orange terrorism alert, with the recent attack in Saudi Arabia the day before, and with renewed suicide bombings in the Middle East, the National Academies’ Committee on Law and Justice convened its third Roundtable on Social and Behavioral Sciences and Terrorism on May 13. (See Update, April 15, 2002 and January 13, 2003 for reports of the earlier meetings). The idea of the Roundtable, noted Michael Feuer, Executive Director of the Division on Behavioral and Social Sciences and
Education of the National Research Council, is to engage expertise in and out of government on issues of public policy. The focus of the latest meeting was on “Screening for Terrorists.”

There are only a few things we know or imagine doing to combat terrorism, observed Philip Heymann, Professor of Law and Government at Harvard University and Co-Chair of the Roundtable with Michael Chertoff, Assistant Attorney General for the Criminal Division at the Department of Justice. According to Heymann, these include: deterrence, incapacitating terrorism through attacks, and keeping attractive targets or resources from would-be terrorists. Using screening to identify people who should be watched more carefully would help prevent access to resources and targets. He acknowledged, however, that screening has problems. It includes making decisions to deny access without a criminal reason and thus, adversely affecting innocent people.

Heymann observed that lie detectors, background checks, and file checks are less reliable and cheap ways to screen for potential terrorists. To save costs in delays and resources you could limit the number of people by “profiling.” However, Heymann noted, it has the “disadvantage of divisiveness.” The alternative, having government perform data mining on vast amounts of information also raises problems. The adverse reaction to the proposed Total Information Awareness program headed by former National Security Adviser John Poindexter reflects Americans’ uneasiness about giving the government access to vast amounts of information about people’s lives.

**Characteristics of Suicide Bombers**

The Roundtable heard Ariel Merari, Professor of Psychology, Tel Aviv University, Jerusalem (via videoconference) and Marc Sageman, a Forensic Psychiatrist in private practice, discuss the characteristics of suicide bombers in Israel and those associated with the Global Salafi Mujahedin, respectively. Despite the belief held by many that terrorists, particularly suicide bombers, are psychopaths, Merari and Sageman found that these individuals have no appreciable psychopathology.

The bad news when describing the profile of a suicide bomber, according to Merari’s research, is that there is almost no profile. This conclusion comes from data compiled since 1983 on suicide bombers from countries where this phenomenon has occurred. Merari also examined detailed data from nearly 200 Palestinian suicide and attempted-suicide terrorists, operating since 1993. Since it is difficult to interview suicide terrorists to perform a psychological autopsy after their missions, Merari conducted interviews with family members and reviewed school records. He also spoke with would-be suicide bombers now in jail and with those who prepared and launched the bombings, including members of Hamas and the Islamic Jihad.

Sageman’s study is based on the examination of 129 biographies, transcripts of trials (U.S., France, Germany, and Egypt), press accounts (English, French, German, Arabic), academic publications, and information cross-checked via the Internet, of the Global Salafi Mujahedin. These individuals came from core Arab states who participated in what he called the three phases of the Jihad: 1) Soviet Afghan war (1989); 2) Sudan exile (1989-1996); and 3) Global Jihad (1996-2003).

What we know about the Palestinian suicide bombers, said Merari, is “rather mundane and trivial.” A look at the demographics reveals an average age of 21 or 22, but these folks ranged from 16 to 53 years old. They are usually single, not engaged to be married, and have no children. Although they work for organizations who stress religion, they are not more religious than families in the surrounding society. Religion is neither a necessary nor sufficient factor to become a suicide bomber, Merari concluded. It can act as a motivating factor, but is no stronger than patriotism. With regard to socioeconomic factors, the bombers are no different from the societies in which they grew up and often describe their economic situations as average. Most have had at least some high school education.

Sageman’s Mujahedin were also mostly young, more than half born in the 1970s. Those in the recent Jihad period came mostly from the upper class or royalty. They are highly educated with most having some college and a few with postgraduate degrees. Less than a quarter were unskilled laborers, a little more than a quarter students or full time Mujahedin, and the rest mostly in professional or business occupations. With regard to religion, these individuals could be described as very devout as adults. In contrast to the Palestinians, Sageman found that the majority of the Mujahedin were married with children.

Merari found nothing pathological in the personalities of the suicide bombers. He did conclude that about one-third of them were suicidal. They wanted to die anyway and took advantage of the opportunity. He explained that ordinary suicide is forbidden in Islam, as it is in most religions. Individuals who do commit suicide are pitied along with their families. But if they commit suicide in the context of freedom fighting, they are considered heroes. Merari noted that the supportive atmosphere in
general for suicide bombers helps to perpetuate this phenomenon. They are admired via posters and songs.

This personality profile does not mean suicide bombers are absolutely normal, Merari cautioned. Generally speaking, they are persons who could be characterized as marginal. They are not leaders and have a record of frustration in work and school and tend to be rigid and contrite. More than half of them, he noted, have some sort of masculine self-image problem. They look for ways to gain social recognition in the absence of other symbols and “are using this extreme act to get some sort of recognition.”

The groups to which these would-be suicide bombers join utilize social pressure by peers to extract an irrevocable commitment. The volunteers are taken in by the organization and it makes certain that they cannot escape. The power of this group structure ensures that they carry out their missions to the end.

An important question is: What is the state of mind of the suicide bombers as they go toward their targets? For most, they are already dead mentally, Merari explained. They report a mental state constricted with their attention on the target detached from emotion. This mental state does not allow for hesitation. Others have reported hesitation, described fear, and often wonder what will happen to their families, both socially and economically.

Sageman’s fighters exhibited only one instance of possible thought disorder. In addition, he found very little trauma in the families and suggested that these individuals were “over-protected” in their youth. He also detected no “pathological narcissism” and suggested overall these were “good kids.” However, the vast majority (80-85 percent) were alienated from society at large and Sageman described them as a “discriminated second generation.” Their recruitment came through preexisting friendships that formed clusters and they joined the Jihad via outside contacts (Imans, family, acquaintances). They did not start out religious, but gravitated to a religious social life for emotional needs, he explained. Social bonds came before ideology, which, along with group dynamics, made terrorism possible, Sageman concluded.

Cautions About Technology

Stephen Fienberg, Professor of Statistics at Carnegie Mellon University, cautioned the Roundtable against “overconfidence” in technology. He urged that policymakers not trust the accuracy of machines beyond what is justified by independent evidence. He cited the use of polygraph screening by the Department of Energy as an example. According to Fienberg, polygraph testing yields an unacceptable choice for DOE employee security screening between: too many loyal employees falsely judged deceptive and too many major security threats left undetected. He noted that a recent NAS report, Polygraph and Lie Detection, observed that polygraph accuracy is insufficient to justify reliance on its use in employee security screening in Federal agencies (see Update, October 21, 2002). At the recent meeting of the Committee on National Statistics on May 9, Emmett Keeler of the RAND Corporation also discussed the report, which is available at www.nap.edu. Both Keeler and Fienberg concluded that overconfidence in polygraph screening presents a danger to national security objectives.

According to Fienberg, when it comes to screening for terrorists, there is the problem of low base rates. In addition, there are the questions of where do we get our data? Does it contain selection biases? Is it full of measurement error? There is also the problem of predicting events that have never occurred, Fienberg continued. How would we validate our predictions, he asked? Fienberg questioned whether data mining could come to the rescue. The computer, he noted, does as well or better than the human can do, but if you cross validate data mining, it gets “beat down badly.”

Fienberg also discussed the use of biometrics in which pictures are taken and names attached and integrated into databases to help national security. The vision is that technology will allow for identity recognition based on intelligent fusion of information from multiple biometrics. There could be “a reasonably accurate use of biometrics for authentication with ‘idealized’ data bases,” Fienberg noted. The reality is that the only thing we know to do so far is biometric authentication, which is different than matching records across databases. There are challenges in face recognition, for example, pose, illumination, expression, occlusion, time lapse, and individual factors such as gender, Fienberg elaborated. In addition, there is lots of noise and bias resulting in lower accuracy. This week the Department of Homeland Security announced that research has determined that individuals can be identified, with high accuracy rates, by the gait of their walk.

Concluding his remarks, Fienberg once again underscored a need to balance the risks with the benefits and called for greater attention to the issues of privacy and confidentiality. Noting that there is a large group of distributive databases, Fienberg observed that the vision of DARPA (the Defense Advanced Research
Projects Agency) is to put a big security box around the databases. The resultant data merger, however, may contain a lot of measurement error and will require highly sophisticated statistical tools, he explained. Fienberg cautioned that checks appropriate in one place may not apply to other places. Accordingly, the system may be compromised.

'Ve Don't Know What We Know'

Philip Zelikow, Executive Director of the National Commission on Terrorist Attacks in the United States and Director of the Miller Center for Public Affairs and Burkett Miller Professor of History at the University of Virginia, discussed the recommendations from the Markle Foundation Task Force, Protecting America's Freedom in the Information Age (see www.markle.org). He pressed the case for creating the capacity to share information and integrating the way that it is analyzed.

According to Zelikow, America's system to analyze and process the abundance of information that is currently available is weak. "We don't know what we know," he observed. The Markle report calls for a networked information technology system that shares information among local, state, Federal and private sectors. The power is in the field, said Zelikow. Those outside the Federal government need help to know what to look for, what to report, to whom to report, and what it means. It is necessary to create a more horizontal, cooperative, and fluid process for intelligence collection, sharing, and analysis, the report argues.

The Committee also heard discussions of homegrown terrorism from Andrew Silke of the Home Office in the United Kingdom and Jonathan Drummond of Princeton University. In addition, Charles Bond of Texas Christian University talked about his studies of cross-cultural deception. Jack Glaser of the University of California at Berkeley related the psychological errors and logical pitfalls in racial profiling. The Committee hopes to meet again soon.

HOUSE PANEL CONSIDERS THE AMERICAN COMMUNITY SURVEY

At a May 13 hearing, the House Government Reform Subcommittee on Technology, Information Policy, Intergovernmental Relations and the Census heard testimony about the American Community Survey (ACS). The ACS is an annual data collection effort that would replace the Census long form. Current Census Bureau plans call for implementation of a full annual sample size of three million households by the last quarter of FY 2004. This would begin to yield detailed demographic data for large cities by 2006 and for every community by 2010.

Subcommittee Chairman Adam Putnam (R-FL) explained "that we are rapidly approaching the point where the Census Bureau needs to know one way or the other if there will be a long form in the 2010 census or if the ACS will be the new survey tool." He also noted the dilemma regarding privacy rights and response rates that will impact Congressional decisions regarding the ACS: How can the government "obtain the information that is needed to make informed decisions while at the same time respecting the privacy rights of the public?"

Charles Kincannon, Director of the Census Bureau, told the Subcommittee that the ACS is a "critical component for a successful census in 2010." He noted that approximately $200 billion of the money that Congress appropriates annually is allocated through formulas at least somewhat dependent on census data and asserted that collecting data only once a decade in no longer adequate. Kincannon also explained that there would be a trade off in the switch from the long form to the ACS: information from the ACS will be based on five-year aggregations. While these aggregations will involve a smaller sample size than a decennial long form and will thus present a higher sampling error, "this will be offset by more complete responses to the ACS questionnaire."

The Director asserted that as an added benefit the Community Survey would reduce population estimate errors in the decennial censuses. Putnam asked him to explain this, and Kincannon told the Chairman that the short form has a 13 percent higher response rate than the long form. If the ACS is implemented, all American households would receive the short form in the decennial census process. Putnam also asked Kincannon whether ACS response would be mandatory. Kincannon explained that as a part of the Census process, response to the Community Survey would be required. In addition,
with a smaller working sample size, Census officials will be better able to follow up on non-responses.

A panel of business and local government representatives also testified at the hearing in support of the ACS. Thomas Reardon, Executive Director of the Fulton County, PA Partnership, told the Subcommittee that the limited test-run ACS data that has been made available has been invaluable on a local level. The Partnership provides services for Medicare and Medicaid recipients in Fulton County, a very rural area in southern Pennsylvania. Reardon explained that they have been able to use the data to best allocate limited supplies across the county and demonstrate need for vital services to state and Federal officials.

Joseph Salvo, Director of New York City’s Population Division, testified that the ACS would also assist in the delivery of services in an urban setting: “Our research shows that follow-up enumerators in the 2000 ACS were far more successful in obtaining critical information on birthplace, occupation, and income than in the 2000 Census.” He also noted that ACS pilot tests have produced a higher level of completed questionnaires and lower levels of missing data on key social and economic items, yielding fewer situations where the Census Bureau must employ a procedure that “imputes” part of all of a household’s characteristics.

Joan Naymark, the Director of Research and Planning for the Target Corporation, appeared as a representative of the U.S. Chamber of Commerce. Naymark serves as the Chamber’s representative to the Secretary of Commerce’s Census Advisory Committee. She asserted that the ACS is vital to economic development and wise business decision-making, explaining that Target currently uses long form data to select locations for new stores, for advertising and marketing campaigns, and to support community giving and for other uses. This is typical of a large number of American corporations and small businesses.

In one of the most striking moments of the hearing, Putnam asked this panel if any of them objected to implementing the ACS. There was silence. The Chairman then asked the witnesses if any of them could think of a group that should have been called because it objects. The panel could only think of very minor objections held by select groups. It is clear that there is widespread support for the ACS. It remains to be seen, however, whether this will translate into adequate funding from Congress as the FY 2004 appropriations process gets underway.

**BOLTON TO SERVE AS NEXT BUDGET CHIEF**

On May 22, President Bush announced his nomination of Josh Bolton as Director of the Office of Management and Budget (OMB). Bolton, who currently serves as Assistant to the President and Deputy White House Chief of Staff for Policy, will replace Mitch Daniels, who is leaving OMB for a return to his native Indiana and a possible run for Governor of the Hoosier state.

The OMB Director serves a key role in developing the annual Federal budget and representing the Administration in the appropriations process as well as overseeing the management of the Federal government. Bolton’s appointment, if the Senate confirms him, will fill the spot with a longtime trusted Bush Administration insider who has been instrumental in formulating and implementing the President’s domestic policy agenda. Bolton is also seen as more diplomatic that Daniels, who often clashed with members of Congress over funding allocations. With the announced departure of White House Press Secretary Ari Fleischer this summer and the impending vacancy in Bolton’s slot in the Chief of Staff’s office, Bush will be left to fill two key White House positions as he opens his reelection campaign.

**SOURCES OF RESEARCH SUPPORT**

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

**Call for Ideas: Global Health Challenges**

The National Institutes of Health, in collaboration with the Bill and Melinda Gates Foundation, has issued a call for ideas to identify and address grand challenges in global health. The initiative is designed to support scientific and technological research. Led by an international scientific board, the initiative is seeking the participation of the “global scientific community in articulating the ‘Grand Challenges’ for scientific exploration that will ultimately increase research attention to the most critical health problems in the developing world.”

The primary intention of the initiative is to stimulate research that will produce solutions. It is expected “to draw widespread attention to interesting problems with major consequences for public health; in addition it will provide funding to solve those problems.”
The Grand Challenge is “neither the statement of the global health problem itself (e.g., malaria or AIDS) nor the request for a specific health intervention (e.g., drug or vaccine), but the call for a discrete scientific or technological innovation which will break through the roadblock that stands between where we are now and where we would like to be in science, medicine, and public health.”

The initiative will address the diseases and health conditions that cause the greatest morbidity and mortality in the developing world, thus accounting for the enormous health disparities between the developing and developed world.

Criteria for selection include:

- The magnitude of the health problem being addressed and its alignment with the scope of the program.
- The identification of the scientific or technical roadblock to achieving a solution and why the roadblock is limiting on a critical path to achieving the solution.
- The soundness of the scientific and technical foundation for the proposed challenge, not merely the ease or likelihood of success.
- The impact of solving the Grand Challenge on the health problem, including indirect benefits such as those on income or environment.
- The feasibility of widely implementing any solution to the Grand Challenge in the context of the developing world.

Submissions are due June 15, 2003. For more information about the initiative, see www.grandchallengesgh.org.

Disparities in Mental Health

The Program for Research on Black Americans at the University of Michigan’s Institute for Social Research is offering a training program for postdoctoral fellowships in “Racial, Ethnic, and Cultural Disparities in Mental Health.” Candidates should have earned a Ph.D., M.D. or doctoral degree equivalent in the social, health, or behavioral sciences.

The positions are funded by a training grant from the National Institute of Mental Health and are for research focusing on the mental health of racial or ethnic minorities in the United States, with a particular emphasis on African Americans, Latinos, and Asian Americans. The salary stipend for post-doctoral positions ranges from $28,260 to $44,412 depending on experience level. Postdoctoral positions come with full health care benefits. The anticipated starting date is Fall 2003.

Applicants should send a letter stating research interests, relevant prior training, and a curriculum vita to: James S. Jackson, Ph.D./Program for Research on Black Americans/Institute for Social Research/University of Michigan/426 Thompson Street/Ann Arbor, MI 48106-1248. The Program’s phone number is (734) 763-0045 and the fax is (734) 763-0044.
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