



AMERICAN
PSYCHOLOGICAL
ASSOCIATION

Science Directorate

Written Testimony of
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Submitted to the
United States Senate
Committee on Appropriations
Subcommittee on Defense
The Honorable Daniel K. Inouye, Chairman

**Fiscal Year 2011 Appropriations for the
Department of Defense**

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The American Psychological Association (APA) is a scientific and professional organization of more than 152,000 psychologists and affiliates.

For decades, psychologists have played vital roles within the Department of Defense (DoD), as providers of clinical services to military personnel and their families, and as scientific researchers investigating mission-targeted issues ranging from airplane cockpit design to counter-terrorism. More than ever before, psychologists today bring unique and critical expertise to meeting the needs of our military and its personnel. APA's testimony will focus on reversing Administration cuts to the overall DoD Science and Technology (S&T) budget and maintaining support for important behavioral sciences research within DoD.

DoD Research

“People are the heart of all military efforts. People operate the available weaponry and technology, and they constitute a complex military system composed of teams and groups at multiple levels. Scientific research on human behavior is crucial to the military because it provides knowledge about how people work together and use weapons and technology to extend and amplify their forces.”

Human Behavior in Military Contexts
Report of the National Research Council, 2008

Just as a large number of psychologists provide high-quality ***clinical services*** to our military service members stateside and abroad (and their families), psychological scientists within DoD conduct cutting-edge, ***mission-specific research*** critical to national defense.

Behavioral Research within the Military Service Labs and DoD

Within DoD, the majority of behavioral, cognitive and social science is funded through the Army Research Institute (ARI) and Army Research Laboratory (ARL); the Office of Naval Research (ONR); and the Air Force Research Laboratory (AFRL), with additional, smaller human systems research programs funded through the Office of the Secretary of Defense (OSD) and the Defense Advanced Research Projects Agency (DARPA).

The military service laboratories provide a stable, mission-oriented focus for science, conducting and sponsoring basic (6.1), applied/exploratory development (6.2) and advanced development (6.3) research. These three levels of research are roughly parallel to the military's need to win a current war (through products in advanced development) while concurrently preparing for the next war (with technology "in the works") and the war after next (by taking advantage of ideas emerging from basic research). All of the services fund human-related research in the broad categories of personnel, training and leader development; warfighter protection, sustainment and physical performance; and system interfaces and cognitive processing.

National Academies Report Calls for Doubling Behavioral Research

The 2008 National Academies report on *Human Behavior in Military Contexts* recommended doubling the current budgets for basic and applied behavioral and social science research "across the U.S. military research agencies." It specifically called for enhanced research in six areas:

- intercultural competence;
- teams in complex environments;
- technology-based training;
- nonverbal behavior;
- emotion; and
- behavioral neurophysiology.

Behavioral and social science research programs eliminated from the mission labs due to cuts or flat funding are extremely unlikely to be picked up by industry, which focuses on short-term, profit-driven product development. Once the expertise is gone, there is absolutely no way to "catch up" when defense mission needs for critical human-oriented research develop. As DoD noted in its own Report to the Senate Appropriations Committee:

“Military knowledge needs are not sufficiently like the needs of the private sector that retooling behavioral, cognitive and social science research carried out for other purposes can be expected to substitute for service-supported research, development, testing, and evaluation...our choice, therefore, is between paying for it ourselves and not having it.”

Defense Science Board Calls for Priority Research in Social and Behavioral Sciences

This emphasis on the importance of social and behavioral research within DoD is echoed by the Defense Science Board (DSB), an independent group of scientists and defense industry leaders whose charge is to advise the Secretary of Defense and the Chairman of the Joint Chiefs of Staff on “scientific, technical, manufacturing, acquisition process, and other matters of special interest to the Department of Defense.”

In its report on *21st Century Strategic Technology Vectors*, the DSB identified a set of four operational capabilities and the “enabling technologies” needed to accomplish major future military missions (analogous to winning the Cold War in previous decades). In identifying these capabilities, DSB specifically noted that “the report defined technology broadly, to include tools enabled by the social sciences as well as the physical and life sciences.” Of the four priority capabilities and corresponding areas of research identified by the DSB for priority funding from DoD, the first was defined as “mapping the human terrain” – understanding the human side of warfare and national security.

FY11 DoD Budget for Science and Technology

DoD

In terms of the overall DoD S&T budget, the President’s request for FY11 again represents a dramatic step backward for defense research. Defense S&T would fall from the estimated FY10 level of \$14.7 billion to \$12.3 billion (a decrease of 16.3%). All military labs would see cuts to their 6.2 and 6.3 research accounts, with some cuts as high as 49% (the Army’s 6.3 account). Defense-supported basic research (6.1 level accounts) would fare better under the President’s budget, and APA supports the substantial increase proposed for the OSD’s Defense-wide basic research program, but we are very concerned about the deep cuts to near-term research supported by the 6.2 and 6.3 program accounts.

DARPA

DARPA’s overall funding would increase only slightly in the President’s FY11 budget, from \$3 billion to \$3.1 billion. The agency’s home for basic research, the Defense Research Sciences Account, however, would be strengthened significantly. APA supports DARPA’s transformative sciences priorities for this account, which include research that taps “converging technological forces and

transformational trends in the areas of computing and the computing-reliant subareas of social sciences, life sciences, manufacturing and commerce.”

FOCUS FOR MINERVA RESEARCH

APA was pleased to see the House Armed Services Committee note (in the FY11 National Defense Authorization Act) its support for “the use of social science to support key DOD missions such as irregular warfare, counterinsurgency, and stability and reconstruction operations” through research funded by the DoD Minerva initiative established by Secretary Gates. APA agrees with the House that DoD “has not provided enough focus for the Minerva initiative to develop a deep enough expertise in any of its seven topic areas,” especially in “understanding the extremist ideologies that help fuel recruitment of terrorists.” APA supports the FY11 NDAA authorization of \$96.2 million, \$5 million above the President’s budget request, for DoD to conduct Minerva initiative research to improve our understanding of extremist ideologies.

Summary

The President’s budget request for basic and applied research at DoD in FY11 is \$12.3 billion, which represents a dramatic cut of \$2.4 billion or 16% from the enacted FY10 level of \$14.7 billion. APA urges the Subcommittee to reverse this cut to the critical defense science program by providing a total of \$15 billion for Defense S&T in FY11.

APA supports the substantial increases to DoD’s and DARPA’s basic research portfolios, but joins the Coalition for National Security Research in urging Congress to provide sufficient overall funding to reach the Pentagon’s goal of investing three percent of DoD’s total budget in Defense S&T.

Within the S&T program, APA encourages the Subcommittee to follow recommendations from the National Academies and the Defense Science Board to fund priority research in the behavioral sciences in support of national security. Clearly, psychological scientists address a broad range of important issues and problems vital to our national defense, with expertise in modeling behavior of individuals and groups, understanding and optimizing cognitive functioning, perceptual awareness, complex decision-making, stress resilience, recruitment and retention, and human-systems interactions. We urge you to support the men and women on the front lines by reversing another round of cuts to the overall defense S&T account and the human-oriented research projects within the military laboratories.

As our nation rises to meet the challenges of current engagements in Iraq and Afghanistan as well as other asymmetric threats and increased demand for homeland defense and infrastructure protection, enhanced battlespace awareness and warfighter protection are absolutely critical. Our ability to both foresee and immediately adapt to changing security environments will only

become more vital over the next several decades. Accordingly, DoD must support basic Science and Technology (S&T) research on both the near-term readiness and modernization needs of the department and on the long-term future needs of the warfighter.

Below is suggested appropriations report language for FY11 which would encourage the Department of Defense to fully fund its behavioral research programs within the military laboratories and the Minerva initiative:

Department of Defense

Research, Development, Test, and Evaluation:

The Minerva Initiative and Behavioral Research in the Military Service Laboratories: The Committee notes the increased demands on our military personnel, including high operational tempo, leadership and training challenges, new and ever-changing stresses on decision-making and cognitive readiness, and complex human-technology interactions. To help address these issues vital to our national security, the Committee has provided increased funding to reverse cuts to psychological research through the military research laboratories: the Air Force Office of Scientific Research and Air Force Research Laboratory; the Army Research Institute and Army Research Laboratory; and the Office of Naval Research. The Committee also notes the critical contributions of behavioral science to combating counter-insurgencies and understanding extremist ideologies, and renews its strong support for the DoD Minerva initiative.

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