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PSYCHOLOGICAL SCIENCE AGENDA

Psychological Science Agenda is published monthly by APA's Science Directorate. Dedicated to promoting and serving scientific psychology, Psychological Science Agenda provides news about national scientific policy developments, examines policy issues affecting and affected by the behavioral research community, and highlights the advocacy efforts of the Science Directorate on behalf of research and academic psychologists. Psychological Science Agenda also features news of APA's governance and program initiatives relating to scientific and academic psychology, and provides valuable, timely information about funding opportunities for research psychologists.

Psychological Science Agenda is distributed free to 30,000 psychologists, members of Congress and their staffs, key officials in federal agencies that fund behavioral research and use its findings, institutional libraries, and science writers in the national media.

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APA Urges Congress to Support VA Research

By Heather Kelly

TABLE OF CONTENTS

**APA Urges Congress
To Support VA Research 1**

**Executive Director's
Column: Ethics for
Psychological Scientists 2**

**SPECIAL REPORT:
From the Board
Of Scientific Affairs 3**

**SCIENCE BRIEF:
Essentialism In
Everyday Thought 4**

**May 2005
Announcements 6**

SCIENCE NEWS 8

Many psychologists working within the Department of Veterans Affairs (VA) play dual roles, serving both as clinicians and research scientists committed to improving the lives of our nation's veterans. In April, APA made the most of an opportunity to testify before the new House Military Quality of Life and VA Appropriations Subcommittee on Capitol Hill, strongly advocating for increased support of the VA's intramural research program. Executive Director for Science Steven Breckler delivered APA's testimony, highlighting for Members of Congress the scope of psychology's research contributions and the potential ramifications of cuts to the behavioral research enterprise.

Through its Medical and Prosthetic Research Account, the VA funds intramural research in support of its clinical mission to care for veterans, and VA psychological scientists conduct research in high-priority areas such as mental health, substance abuse, aging-related disorders, and physical and psychosocial rehabilitation. For example, VA psychologists continue to be at the forefront of cutting-edge research on, assessment of and treatment for Post-traumatic Stress Disorder (PTSD). The care of veterans suffering psychological wounds as a result of military service is at the heart of the VA's mandate "to care for him who shall have borne the battle," and preventing and treating PTSD

Continued on page 7...



Steve Breckler testifies before the House Military Quality of Life and VA Appropriations Subcommittee

EXECUTIVE DIRECTOR'S COLUMN

STEVEN BRECKLER, Executive Director for Science

Ethics for Psychological Scientists

On April 29 and 30, the APA Science Directorate held a workshop with the Fordham University Center for Ethics Education. The workshop focused on developing a decisional framework to aid investigators and IRBs in determining whether a research protocol qualifies as "minimal risk" under the federal regulations. This is a critical issue when it comes to our interactions with IRBs, and researchers will want to watch for the outcomes of this workshop.

Preparing for the workshop, and then spending two days as a participant, prompted me to think a lot about the ethical context of scientific psychology. I must confess that I have rarely pondered this topic very deeply. As a researcher, and later as a grants administrator, I surely gave consideration to ethical matters. I think most psychological scientists do, and that they implicitly adhere to ethical principles. But what, precisely, are those principles?

For psychological scientists, many of our ethical principles derive from the federal regulations bearing on the protection of human participants in research and on the care and use of animals in research. Yet, we have much more than that to guide us. Since at least the early 1950s, APA has maintained and published its ethical standards of psychologists. The most recent version was adopted in 2002, and is freely available at the APA website (<http://www.apa.org/ethics/code.html>).

As a scientific discipline and as a profession, it is important for psychology to articulate its ethical principles. It gives us credibility and respect. It provides a vehicle for resolving ethical issues, and it offers guidance in an often-ambiguous world. Yet, I suspect that many psychological scientists (myself included) assume that APA's ethical principles are mainly intended for practitioners and the clinical context. We assume that it applies primarily to therapist-client relationships, privacy and

confidentiality, and record keeping and fees. The ethical principles do address all of these matters. But they address much more.

When I came to work at APA last year, I carefully read the ethics code. It had been many years since I had last done that, and I assumed that it would be a quick read – how much of it could be relevant to a scientist? I was sadly mistaken. The third paragraph of the APA Ethics Code caught my attention:

Membership in the APA commits members and student affiliates to comply with the standards of the APA Ethics Code and to the rules and procedures used to enforce them. Lack of awareness or misunderstanding of an Ethical Standard is not itself a defense to a charge of unethical conduct.

The APA Ethics Code applies to our scientific, educational, and professional roles as psychologists. In addition to the clinical, counseling, and school practice of psychology, it covers research, publication, teaching, education, training, social intervention, consulting, and administration. It connects to the federal regulations that protect research participants and subjects, and goes beyond those regulations in many important ways. The ethical principles of psychologists are just as pertinent and relevant to psychological scientists as they are to psychologist practitioners.

As readers of this column know, the APA Science Directorate is organizing its programs and priorities around Psychological Science for the 21st Century (PSY21). One aim of the PSY21 initiative is to support and promote the responsible conduct of research. Helping psychological scientists to understand and follow our own ethical principles is key. We will support workshops and conferences, develop resources and guides, and do all we can to engage psychological scientists in the ethical principles and standards of our discipline and our profession.

APF/COGDOP GRADUATE RESEARCH SCHOLARSHIPS IN PSYCHOLOGY

The American Psychological Foundation (APF) and the Council of Graduate Departments of Psychology (COGDOP) are jointly offering graduate research scholarships, including the \$2,000 Clarence J. Rosecrans Scholarship, the \$3,000 Ruth G. and Joseph D. Matarazzo Scholarship, as well as a number of \$1,000 scholarships.

The scholarships will be given directly to the individual graduate students enrolled in an interim master's program or doctoral program. If a student is currently enrolled in a terminal master's program, the student must intend to enroll in a PhD program. Several fellowships have been reserved for students who, at the time of application, are within the first two years of graduate study in psychology. The purpose of the scholarship program is to assist graduate students of psychology with research costs. The American Psychological Association Science Directorate administers the granting of the scholarships.

The deadline for applications is June 27, 2005. Please visit www.apa.org/science/apf-cogdop.html for a link to the application and instructions.

SPECIAL REPORT

Report from the Board of Scientific Affairs

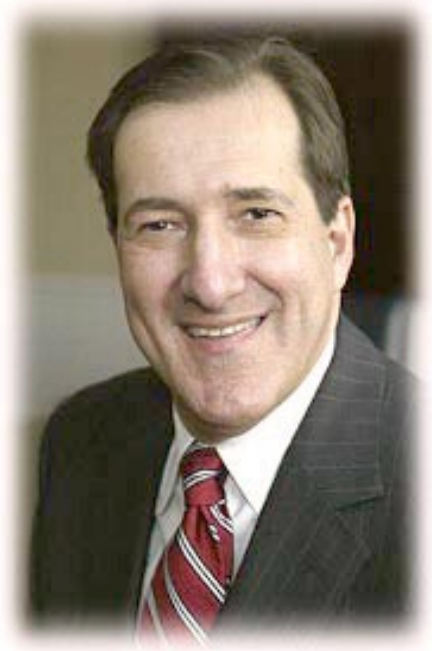
By Ronald T. Brown, PhD

I am a newly elected member of the Board of Scientific Affairs (BSA) and attended my first board meeting in March 2005. BSA meets twice a year in the spring and the fall in the Washington, DC area. This March meeting took place in Leesburg, Virginia, far from downtown Washington, and afforded us the opportunity to really focus on our meeting agenda and to meet with other APA boards and committees who were meeting at the same time and same place.

BSA focused on issues within the Science Directorate and related to our scientific constituency in general. We reviewed the establishment of an ad-hoc committee on research issues that would include specific topics relevant to the responsible conduct of research. The group was formally named the Ad Hoc Committee to Advance Research (AHCAR). Board members nominated individuals

for this important task force which will serve to advance research by navigating some of the difficult issues related to conducting research including protection of human participants in behavioral research, management, sharing and ownership of data, publication practices and research misconduct and responsible authorship.

Dr. Steven Breckler, Executive Director for Science, provided an update to BSA on the PSY21 initiative that includes the AHCAR, the Science Leadership Conference, and the Culture of Service initiative. BSA members are looking forward to the first Science Leadership Conference, later this year, which will provide a forum for scientists to communicate and collaborate in developing a common science agenda. Potential conference themes were discussed as well as other important components



of the conference including media and advocacy training for participants, mentoring, and breakout or workshop groups.

A large part of our agenda consisted of issues that needed science advice, consultation and comment. BSA reviewed the Policy and Planning Board's 5-Year Report; commented on the proposed Mechanism for Renewal of Expiration of Guidelines and Standards and the Presidential Initiative of Promoting Health Care of the Whole Person. Other reports we reviewed at the meeting included the APA Presidential Task Force on Enhancing Diversity within the Association, Revisions to the APA National Standards for the Teaching of High School Psychology, Development of a Strategic Plan for a Workforce Analysis of Psychology as a Discipline, Resolution on Drug Abuse Treatment to Prevent HIV



BSA and Science Directorate Staff at the Spring, 2005 Consolidated meetings.

(Sitting from left) Hazel Markus, Marilyn Carroll, Sandra Graham.

(Standing from left) Merry Bullock, Liora Schmelkin, John Weisz, Ronald Brown, Norman Spear, Suzanne Wandersman, Steven Breckler

Continued on page 12...

SCIENCE BRIEF

Essentialism in Everyday Thought

by Susan A. Gelman, University of Michigan



Susan A. Gelman earned her Ph.D. in Psychology from Stanford University in 1984. She then joined the faculty of the University of Michigan (since 1984), where she is currently the Frederick G. L. Huetwell Professor of Psychology and Associate Dean for Social Sciences, College of LSA. Her research interests focus on concept and language development in young children. She has published 6 books and monographs and over 100 articles and chapters, including *The Essential Child* (Oxford, 2003), which won the Eleanor E. Maccoby book prize of APA Division 7. Professor Gelman is the 1991 recipient of the APA Distinguished Scientific Award for Early Career Contribution to Psychology in the Developmental Area, the American Psychological Foundation Robert L. Fantz Award, the Chase Memorial Award, the Boyd McCandless Young Scientist Award from APA Division 7, and a J. S. Guggenheim Fellowship. She has served on the editorial boards of several journals, and is president-elect of the Cognitive Development Society.

4

The following observations may seem wholly unrelated, but all can be understood within a framework of psychological essentialism:

- a. The president of Harvard recently suggested that the relative scarcity of women in “high-end” science and engineering professions is attributable in large part to male-female differences in intrinsic aptitude (Summers, 2005).
- b. In a nationally representative survey of Black and White Americans, most adults agreed with the statement, “Two people from the same race will always be more genetically similar to each other than two people from different races” (Jayaratne, 2001).
- c. Nearly half the U.S. population reject evolutionary theory, finding it implausible that one species can transform into another (Evans, 2001).
- d. A recent study of heart transplant recipients found that over one third believed that they might take on qualities or personality

Acknowledgements

Portions of this article are based on Gelman, S. A. (2004). Psychological essentialism in children. *Trends in Cognitive Sciences*, 8, 404-409. Preparation of this article and some of the research described within were supported by NICHD grant HD36043 to the author. I thank Brandy Frazier, Bruce Mannheim, and Laura Novick for comments on an earlier draft.

characteristics of the person who had donated the heart (Inspector, Kutz, & David, 2004). One woman reported that she sensed her donor’s “male energy” and “purer essence” (Sylvia & Novak, 1997; pp. 107, 108).

- e. It is estimated that roughly half of all adopted people search for a birth parent at some point in their lives (Müller & Perry, 2001).
- f. People place higher value on authentic objects than exact copies (ranging from an original Picasso painting to Britney Spears’s chewed-up gum; Frazier & Gelman, 2005).

Essentialism is the view that certain categories (e.g., women, racial groups, dinosaurs, original Picasso artwork) have an underlying reality or true nature that one cannot observe directly. Furthermore, this underlying reality (or “essence”) is thought to give objects their identity, and to be responsible for similarities that

category members share. Although there are serious problems with essentialism as a metaphysical doctrine (Mayr, 1991), recent psychological studies

converge to suggest that essentialism is a reasoning heuristic that is readily available to both children and adults. In this piece I review some of the evidence for essentialism, discuss the implications for psychological theories, and consider how language influences essentialist beliefs. I conclude with directions for future research.

Evidence for psychological essentialism

Medin and Ortony (1989) suggest that essentialism is a “placeholder” notion: one can believe *that* a category possesses an essence without knowing *what* the essence is. For example, a child might believe that there exist deep, non-obvious differences between males and females, but have no idea just what those differences are. The essence placeholder would imply: that category members are alike in unknown ways, including a shared underlying structure (examples b, d,

Continued on page 5...

...Science Brief,

continued from page 4

and f above); that there is an innate, genetic, or biological basis to category membership (examples a, b, and e above); and that categories have sharp and immutable boundaries (examples b and c above). Elsewhere I have detailed at length the evidence that preschool children expect certain categories to have all of these properties (Gelman, 2003, 2004). Here I briefly illustrate with two examples: innate potential and underlying structure.

Innate potential. One important kind of evidence for essentialism is the belief that properties are fixed at birth (also known as innate potential). To test this notion, researchers teach children about a person or animal that has a set of biological parents and then is switched at birth to a new environment and a new set of parents. Children are then asked to decide whether the birth parents or the upbringing parents determine various properties. For example, in one item set, children learned about a newborn rabbit that went to live with monkeys, and were asked whether it would prefer to eat carrots or bananas, and whether it would have long or short ears (Gelman & Wellman, 1991). Preschool children typically report that it prefers carrots and has long ears. Even if it cannot eat carrots at birth (because it is too young), and it is raised by monkeys that don't eat carrots, and it never sees another rabbit, eating carrots is inherent to rabbits; this property will eventually be expressed. Although there is debate as to when precisely this understanding emerges, even on a conservative estimate it appears by about 6 years of age. Intriguingly, for some categories children are more likely than adults to view properties as innately determined. For example, 5-year-olds typically predict that a child who is switched at birth will speak the language of the birth parents rather than the adoptive parents (Hirschfeld & Gelman, 1997). Beliefs about birth and reproduction vary widely across cultures; nonetheless, Torquod adults

in Western Mongolia (Gil-White, 2001), upper-caste adults in India (Mahalingam, 2003), Vevo children in Madagascar (Astuti, Carey, & Solomon, 2004), and Itzaj Maya adults and children in Mexico (Atran, Medin, Lynch, Vapnarsky, Ek', & Sousa, 2001) all display a nativist bias.

Underlying structure. When forming categories, children readily consider properties beyond those that are superficial or immediately apparent. They pay close attention to internal parts and hidden causes (Diesendruck, 2001; Gopnik, Glymour, Sobel, Schultz, Kushnir, & Danks, 2004). Preschool children infer that properties true of one category member will extend to others of the same category, even when these properties concern internal features and non-visible functions, and even when category membership competes with perceptual similarity. For example, preschool children infer that a legless lizard shares more non-obvious properties with a typical lizard than a snake, even though the legless lizard and the snake look much more alike (Gelman & Markman, 1986; Jaswal & Markman, 2002). Under certain conditions, young children also recognize that an animal cannot be transformed into another kind of thing (for example, a raccoon cannot become a skunk; Keil, 1989). Instead, category membership is stable over striking transformations—as long as the insides remain the same.

Implications of psychological essentialism

Childhood essentialism poses a challenge to traditional theories of children's concepts, which emphasized their focus on superficial, accidental, or perceptual features. Many scholars have proposed one or another developmental shift with age: from concrete to abstract, from surface to deep, or from perceptual to conceptual. In contrast, essentialism points out that abstract, non-obvious features are important to children's concepts from a remarkably young age. Rather than developmental shifts, there are remarkable commonalities

between the concepts of children and those of adults. However, essentialism does not suggest that perceptual features or similarity are unimportant to early concepts. Even within an essentialist framework, appearances provide crucial cues to an underlying essence. Similarity appears to play an important role in fostering comparisons of representations and hence discovery of new abstractions (Namy & Gentner, 2002). Rather than suggesting that human concepts overlook perception or similarity, essentialism assumes that a category has two distinct though interrelated levels: the level of observable reality and the level of explanation and cause.

It is this two-tier structure that may serve to motivate further development. Most developmental accounts of cognitive change include something like this structure, such as equilibration, competition, theory change, analogy, or cognitive variability (see Gelman, 2003, for review). In all these cases, as with essentialism, children consider contrasting representations. When new evidence conflicts with the child's current understanding, this can lead the child gradually to construct new representations. Indeed, targeted interventions that introduce a non-obvious similarity between dissimilar things can lead to dramatic change in children's concepts (Opfer & Siegler, 2004). Perhaps not surprisingly, then, children look beyond observable features when trying to understand the categories of their world. In positing a reality beyond appearances, the search is on for more information, deeper causes, and alternative construals.

Psychological essentialism also has implications for models of categorization. There is an idealized model of categorization that has formed the basis for much work in psychology. Standard theories of concepts have been based on considering which known properties are most privileged, and in what form. In contrast, essentialism tells us that known properties do not constitute the

Continued on page 11...

ANNOUNCEMENTS

Award for Distinguished Service to Psychological Science

The APA Board of Scientific Affairs (BSA) is soliciting nominations for the Award for Distinguished Service to Psychological Science. This Award recognizes individuals who have made outstanding contributions to psychological science through their commitment to a culture of service. Nominees will have demonstrated their service to the discipline by aiding in association governance; serving on boards, committees and various psychological associations; editing journals; reviewing grant proposals; mentoring students and colleagues; advocating for psychological science's best interests with state and federal lawmakers; and promoting the value of psychological science in the public eye. Nominees may be involved in one service area, many of the areas, or all of the service areas noted above. An individual's service to the discipline and not a person's scholarly achievements are the focus of this award.

Award recipients will receive an honorarium of \$1,000. The deadline for nominations is August 25, 2005.

Nominations will be accepted only as electronic submissions to cultureofservice@apa.org. Please be sure to submit the nomination as a package that includes the letter of nomination, vita, and three letters of support.

To submit a nomination provide the following:

- A letter of nomination that describes and supports the individual's contributions (e.g., nature of the individual's service to psychological science, positions held, etc.). The nomination letter should be no more than two pages long.
- A curriculum vita
- Three letters of support from individuals familiar with the nominee's service to the discipline (These letters can be from colleagues who have served with the nominee; a Dean familiar with the nominee's service; former students; Association/Society presidents, etc.)

Comments Needed on Standards for Educational Evaluation!

As a member of the Joint Committee on Standards for Educational Evaluation (JCSEE), APA is invited to participate in the revision of two JCSEE documents, the *Program Evaluation Standards 2* and the *Personnel Evaluation Standards*.

The JCSEE Program Evaluation Standards 2 are intended to influence how government agencies, educational systems, professional organizations, health and human services, business and industry, and independent evaluators conduct evaluations of educational programs. They began their third revision cycle in 2003, with final input scheduled for fall 2005, and anticipated publication in 2006.

The JCSEE Personnel Evaluation Standards are intended to guide how school districts, universities, and other educational entities evaluate employees with respect to issues such as selection, retention, and promotion. The review of the *Standards* began in 2005, and the JCSEE is currently soliciting input for revision.

APA is seeking input from its members to ensure that the content and structure of the Standards reflect current psychological science and practice. JCSEE welcomes three major types of feedback (1) responses to current Standards (listings of both sets of Standards are available on-line at www.wmich.edu/evalctr/jc/), (2) review of draft documents for revisions, and (3) using the new draft Standards in field trials.

Please forward a copy of your input on the *Program Evaluation Standards 2* and the *Personnel Evaluation Standards* to Jeff Braden, PhD, APA Representative to the JCSEE, at jeff_braden@ncsu.edu. Please note that input on the *Program Evaluation Standards 2* must be received no later than **1 Sept., 2005**. Input on *Personnel Evaluation Standards* must be received by 31 January, 2006.

To obtain drafts or to use the draft *Standards* in field trials, contact Barbara Howard, PhD at (bhoward@serve.org).



Subcommittee Ranking Member Chet Edwards (D-TX) and Sam Farr (D-CA)

...Cover Story,

continued from page 1

has become an even more important priority within the VA given the current conflicts overseas and indications of increased mental health needs in deployed and returning military personnel.

After many years of flat funding for the VA's research program and

a cut in Fiscal Year 2005, which was partially restored by Congress, the President has again proposed a cut in VA research funding for Fiscal Year 2006. As a member of the Friends of VA Medical Care and Health Research, a coalition of over 50 organizations concerned about veterans' health, APA has been active in urging Congress to reverse this proposed cut as they write legislation

funding federal agencies. In his testimony, Breckler also encouraged Congress to direct the VA to call upon its psychological researchers and those within the Department of Defense to design and begin a longitudinal study of mental health in a cohort of returning military personnel and veterans. To see APA's testimony in full, visit <http://www.apa.org/ppo/issues/brecklertest05.html>

Methodology and Measurement in the Behavioral and Social Sciences

Program Announcement (PA) Number: PA-05-090

Release Date: April 15, 2005

Standard dates apply, please see <http://grants.nih.gov/grants/funding/submissionschedule.htm> for details.

Visit <http://grants1.nih.gov/grants/guide/pa-files/PA-05-090.html> for program details.

The behavioral and social sciences offer significant fundamental insights into the comprehensive understanding of human health, including disease etiology and treatment, and the promotion of health and well-being. To encourage the investigation of the impact of social and behavioral factors on health and disease, the participating Institutes and Centers invite qualified researchers to submit research grant applications on methodology and measurement in the behavioral and social sciences. Methodology and measurement encompass research design, data collection techniques, measurement, and data analysis techniques. The goal of this program announcement is to encourage research that will improve the quality and scientific power of data collected in the behavioral and social sciences, relevant to the missions of the NIH Institutes and Centers (ICs). Research that addresses methodology and measurement issues in diverse populations, issues in studying sensitive behaviors, issues of ethics in research, issues related to confidential data and the protection of research subjects, and issues in developing interdisciplinary, multimethod, and multilevel approaches to behavioral and social science research is particularly encouraged, as are approaches that integrate behavioral and social science research with biomedical, physical, or computational science research or engineering.

Inquiries should be directed to Dr. Deborah Olster at 301-451-4286.

SCIENCE NEWS

Kanwisher, Medin Elected to National Academy of Sciences

Nancy Kanwisher, professor of cognitive neuroscience at the Massachusetts Institute of Technology, and Douglas Medin, professor of psychology at Northwestern University, were elected to the National Academy of Sciences this spring.

Kanwisher studies live brain imaging as humans perform activities, examining specialized regions and mechanisms for recognizing objects. She studies the neural and cognitive mechanisms underlying human visual perception and cognition. Her work investigates object recognition, visual attention, and perceptual awareness, as well as response selection, social cognition and the human understanding of number. Her lab has identified several regions of the brain that play specialized roles in the perception of specific categories of visual stimuli such as faces, places, and bodies.

Kanwisher is Investigator at the McGovern Institute and Professor in the Department of Brain and Cognitive Sciences. She joined the MIT faculty in 1997, and prior to that was a faculty member at UCLA from 1990 to 1994 and at Harvard University from 1994 to 1997. She received her Ph.D. in 1986 from MIT. In 1999, she received the National Academy of Sciences' Troland Research Award.



Douglas Medin, a 2005 winner of APA's Distinguished Scientific Contribution Award, is director of the interdisciplinary Program in Culture, Language and Cognition. His interests are in theories of learning, memory and induction; computational models of cognition; concept and

classification learning; and models of similarity, culture and cognition.

Medin's recent focus has been on the role of expertise and culture in the conceptual organization of biological categories. The goal is to understand how the correlational structure of things in the world interacts with theories, goals and belief systems to determine categorization and reasoning. One view is that nature imposes biological categories on the human mind, and that categories are recognized rather than constructed. His work shows that different kinds of expertise in the same domain lead to systematic differences in categorization and reasoning.

An important dimension of this project involves cross-cultural comparison, which has involved studying categorization about biological kinds among different populations in Guatemala and Mexico. Most recently he has been examining the linkages between understanding the natural world and environmental behaviors.

Medin has been editor of *The Psychology of Learning and Motivation* and of *Cognitive Psychology*, and currently is consulting editor for the latter journal as well as for *Cognition* and the *Journal of Experimental Psychology: Human Learning and Memory*.

2005 APA Meritorious Research Service Commendations Awarded

by Suzanne Wandersman

Four psychologists were awarded the Meritorious Research Service Commendation. This award, developed by the Board of Scientific Affairs (BSA) recognizes outstanding psychologists who help foster the discipline through their programmatic activities in support of psychological science. BSA members developed this award to provide a clear mechanism for recognizing the important ways that programmatic

contributions can advance the discipline. Nominations were solicited during the winter of 2004 and 2005 and the recipients are:

Susan F. Chipman
[Office of Naval Research (ONR)]

Dr. Chipman is Scientific Officer, Program Manager, and Program Officer in the Cognitive Science Program at the Office of Naval Research. She is being recognized

for her commitment to fostering high quality behavioral science, mentoring of young scientists, and balancing basic and applied research at the Office of Naval Research.

Mary Ellen Oliveri
[National Institute of Mental Health (NIMH)]

Dr. Oliveri is Deputy Director of the Division of Pediatric

Continued on page 11...

Psychologists Talk up Basic Research at Latest Science Advocacy Workshop

by Pat Kobor

Thirteen early-career psychologists came to Washington April 30 through May 2, 2005, to talk with congressional staff about why it's so important for the National Institutes of Health (NIH) to support basic behavioral research. The workshop participants are themselves basic researchers who are all less than ten years past their doctoral degrees.

While in Washington, the participants underwent media training by Kevin Schultze of Soapbox Consulting, and learned more about how Congress shapes the laws that govern their research. Members of the APA Science Policy Staff helped orient the group to pending legislation, namely the NIH reauthorization bill that will likely be introduced soon by the leadership of the House Energy and Commerce Committee.

A highlight was a session in which federal research managers and policymakers spoke about what has and has not changed regarding NIH's support of basic behavioral research. Participating in that session (on a Sunday, no less—these people are dedicated!) were Susan Brandon, PhD, of the White House Office of Science and Technology Policy; Virginia Cain, PhD, of the Office

of Behavioral and Social Sciences Research; David Shurtleff, PhD of the National Institute on Drug Abuse; Richard Suzman, PhD, of the National Institute on Aging; and Kevin Quinn, PhD, of the National Institute on Mental Health.

Before heading off to Capitol Hill for their congressional meetings, the group met with Michael Zamore, Policy Adviser to U.S. Rep. Patrick Kennedy (D-RI). Zamore praised the scientists for taking the time to learn how to communicate better with the congressional offices that represent them, and encouraged them to maintain relationships with those offices.

The researchers met with key congressional staffers who have responsibility for NIH related issues. Workshop participants were chosen in part because they live or work in the district or state of one of the members of the House Energy and Commerce Subcommittee on Health, or the Senate Committee on Health, Education, Labor and Pensions, the authorizing committees for NIH. Half of the group met with Energy and Commerce Committee staff, the other half met with Democratic staff from the Senate HELP Committee. Their message was that NIH needs

to support a balanced portfolio of basic research and applied, clinical research, and any legislation on NIH should retain the infrastructure, for example, the Office of Behavioral and Social Sciences Research, that is needed to support a balanced portfolio and enable the institutes and centers to work together on cross-cutting initiatives.

Participants in the Science Advocacy Workshop were: Abigail Baird, PhD, Dartmouth College; Dan Bauer, PhD, University of North Carolina—Chapel Hill; Mary Boggiano, PhD, University of Alabama—Birmingham; Christopher Braun, PhD, Hunter College; Lowell Gaertner, PhD, University of Tennessee; Kelly Goedert, PhD, Pacific Lutheran University; Adam Goodie, PhD, University of Georgia; Susan Hespos, PhD, Vanderbilt University; Heejung Kim, PhD, University of California—Santa Barbara; Dan Kimball, JD, PhD, University of Texas—Arlington; Keith Payne, Ph.D., Ohio State University; Cynthia Pietras, PhD, Western Michigan University; and Eric Shumacher, PhD, Georgia Institute of Technology.

The participants left with new information and new contacts. Dan Kimball wrote, "One thing I learned was that communicating with policy makers in Congress and elsewhere need not be so daunting a task as I had supposed. I intend to follow through with the contacts I made to press the issue of preserving a place for basic behavioral research at NIH."



Front Row, L – R: Christopher Braun, Kelly Goedert, Abigail Baird, Susan Hespos, Cynthia Pietras.

Middle row, L – R: Mary Boggiano, Adam Goodie, Dan Bauer, Eric Shumacher, Heejung Kim.

Back row, L – R: Dan Kimball, Keith Payne, Lowell Gaertner.

NAS Releases New Report: Facilitating Interdisciplinary Research

by Merry Bullock

Lately, one consistent answer to the question of “where should science be going” is “toward large scale, multidisciplinary research.” You have all heard that the wave of the future is “big science” - multi-disciplinary, multi-institution multi-person teams working together on large questions. And there are many examples where such big science is beginning to pay off - in education, in health and in intervention science.

On the one hand, Psychology is no stranger to an interdisciplinary perspective -- situated between the biological and social sciences, psychology lends itself well to multidisciplinary ventures - as behavioral and neuroscience, psycho-linguistics, human factors, behavioral health, family studies, and similar multidisciplinary “disciplines” attest. Yet at the same time, psychology, like other sciences, encompasses large research areas that thrive on smaller scale focused studies. In addition, psychology, like other sciences, has had a hard time overcoming an academic structure that reinforces disciplinary silos and an individual-based model of intellectual property.

The intent of the recent report “Facilitating Interdisciplinary Research” is to change that. The Committee on National Academics Committee on Science, Engineering and Public Policy (COSEPUP), commissioned an Academy committee (Committee on Facilitating Interdisciplinary Research) to review the state of interdisciplinary research and education and recommend how to foster them. The report summarizes the committees work and information gathered from conferences, interviews, surveys and focus groups. The report is a call to action, with recommendations for academic institutions, funding organizations and professional societies. Here are just a few of the recommendations:

Academic institutions can

- develop ways to fund graduate students across departments
- develop joint programs and internships with industry
- provide training opportunities that involve research, analysis and interactions across different fields

Funding organizations can

- Focus calls for proposals around problems rather than disciplines
- support universities to provide shared resources across disciplines
- provide seed funds to allow researchers across disciplines to develop research plans

Professional societies can

- host workshops on communication and leadership skills needed to foster interdisciplinary teams
- promote networking to establish interdisciplinary partners and collaborations (see the Decade of Behavior at www.decadeofbehavior.org for some activities in this direction);
- establish special awards that recognize interdisciplinary researchers or research teams

Information about the Committee to Facilitate Interdisciplinary Research is at <http://www7.nationalacademies.org/interdisciplinary/>. The report is available for reading online at <http://www.nap.edu/catalog/11153.html>

APA Signs on to Letter Encouraging Easier Access for Foreign Scholars

By Merry Bullock



APA joined over 40 other science, academic and engineering organizations in signing a statement titled “Recommendations for Enhancing the U.S. Visa System to Advance America’s Scientific and Economic Competitiveness and National Security Interests” sent to a number of government bodies, including the State Department, the White House Office of Science and Technology Policy (OSTP) and the Department of Homeland Security. The statement expresses concern that heightened security measures in the visa system

have unintended consequences in reducing the number of foreign scholars who are studying, working and visiting in the US. Because much science and technology is global in scope and activities, such restrictions post a challenge to keeping US science at the cutting edge.

In the statement, the signers thank the Department of State for improvements to the visa system over the last year that have facilitated foreign exchange, but warn that more needs to be done. The US is not perceived as welcoming

Continued on page 13...

...Science News,
continued from page 8

Translational Research and Treatment Development at the National Institute of Mental Health (NIHM). She is being recognized for her advocacy of basic behavioral science within the NIMH, developing new programs and initiatives, and serving as a crucial resource for scores of applicants and grantees at the NIMH.

Cora Lee Wetherington

[National Institute on Drug Abuse (NIDA)]

Dr. Wetherington is Program Officer in the Behavioral and Cognitive Sciences Research Branch in the Division of Basic Neuroscience and Behavioral Research and she is NIDA's Women and Gender Research Coordinator. She is being recognized for her leadership in the areas of research on women and gender and her contributions to bringing gender issues to the forefront of drug abuse research at NIDA and NIH.

Ellen Diane Witt

[National Institute on Alcohol Abuse and Alcoholism (NIAAA)]

Dr. Witt is Health Scientist Administrator in the Neurosciences and Behavioral Research Branch, in the Division of Basic Research at NIAAA. She is being honored for fostering the development of a number of critical research areas in alcohol research and for her constant emphasis on the importance of both basic and applied research in psychological science at NIAAA.

The recipients of the 2005 commendations will be honored at the December 2005 APA Science Leadership Conference.

Past recipients of the Meritorious Research Service Commendation were:

2004:

- Ronald P. Abeles (OBSSR, NIH)
- Israel I. Lederhendler (NIMH)
- G. Reid Lyon (NICHD)
- Willo Pequegnat (NIMH)
- Anita Miller Sostek (NIH)

2003:

- Steven J. Breckler (National Science Foundation)
- Edgar M. Johnson (Army Research Institute)
- Peter G. Kaufmann (National Heart, Lung, and Blood Institute, NIH)
- Lisa S. Onken (National Institute of Drug Abuse, NIH)
- Delores Parron (National Institutes of Health)

2002:

- Rodney Cocking (awarded posthumously) (National Science Foundation)
- Robert Croyle (National Cancer Institute, NIH)
- Sarah Friedman (National Institutes of Child Health & Human Development, NIH)
- David Shurtleff (National Institute of Drug Abuse, NIH)
- Joseph Young (National Science Foundation)

Nominations for the 2006 awards will be accepted beginning in the fall. For additional information, and nomination forms, please see:
<http://www.apa.org/science/meritorious.html>.

...Science Brief,
continued from page 5

full meaning of concepts. Concepts are also open-ended. They are in part placeholders for unknown properties.

Furthermore, it has often been assumed that there is a single, unitary process of categorization (Murphy, 2002). Yet an essentialism perspective, with its focus on both outward and underlying properties, suggests that categorization is more complex: Categorization serves many different functions, and we recruit different sorts of information depending on the task at hand. Rapid identification calls for one kind of process; reasoning about genealogy calls for another.

Task differences yield different categorization processes (Rips, 2001). Even when the task is restricted to object identification, people make use of different sorts of information depending on the task instructions (Yamauchi & Markman, 1998).

Language and Essentialism

Essentialist beliefs are influenced by the language that children hear. Nouns imply that a category is relatively more stable and consistent over time and contexts than adjectives or verb phrases. For example, in one study (Gelman & Heyman, 1999), 5- and 7-year-old children first learned about a set of individuals with either a noun ("Rose is 8 years old. Rose eats

a lot of carrots. *She is a carrot-eater.*") or a verb phrase ("Rose is 8 years old. Rose eats a lot of carrots. *She eats carrots whenever she can.*"). They were then probed for how stable they thought this category membership would be across time and different environmental conditions (e.g., "Will Rose eat a lot of carrots when she is grown up?" "Would Rose stop eating a lot of carrots if her family tried to stop her from eating carrots?"). Children who heard the noun "carrot-eater" were more likely than children who heard the verbal phrase "eats carrots whenever she can" to judge that the personal characteristics

Continued on page 12...

...Special Report,
continued from page 3

Among Injecting Drug Users, and Resolution of the 2005 White House Conference on Aging.

BSA members provided input to the Policy Recommendation and Position Paper of the 2005 Presidential Task Force on Evidenced-Based Practice. We were pleased to see the creation of the Task Force related to empirically validated treatments and more importantly that there was considerable agreement among task force members on several important points. Clearly, a policy statement that underscores the importance of research evidence in prescribing clinical practice is critical in providing care for clients. BSA recommended some important suggested changes that included specific mechanisms for constructing empirically supported treatments, issues pertaining to public outreach, sharing of information between researchers and practitioners, and

completing the developmental age spectrum that includes evidence associated with child and adolescent treatment effects.

I can't forget to point out the science policy update that we received from the staff in the Science Public Policy Office. They are very busy working on Capitol Hill and in the many federal agencies that are relevant to our research.

Some other important agenda items that BSA considered included nominations for the 2006 Distinguished Scientist Lecturer Program and the Master Lecturer Program, nominations for the Committee on Animal Research and Ethics (CARE), the Committee on Psychological Tests and Assessment (CPTA), and most importantly nominations for the 2006 BSA vacancies.

BSA had a very productive meeting and looks forward to its next meeting in the fall.

12

...Science Brief,
continued from page 11

would be stable over time and adverse environmental conditions. (For other examples of noun labeling effects, see also Walton & Banaji, 2004; Waxman, 2003; Xu, 2002.)

Another important linguistic device is the *generic noun phrase*, which refers to a category rather than a set of individuals (e.g., "Cats see well in the dark" is generic; "These cats see well in the dark" is not). Generics express essential qualities and imply that a category is coherent and permits category-wide inferences (Carlson & Pelletier, 1995; Prasada, 2000). When 4-year-old children hear a new fact in generic form (e.g., "Bears have 3 layers of fur"), they treat this fact as typically true of most or all category members (Gelman, Star, & Flukes, 2002). Generic nouns are plentiful in the speech that children hear (Gelman, Coley, Rosengren, Hartman, & Pappas, 1998; Gelman, Taylor, & Nguyen, 2004), and children are highly sensitive to formal linguistic cues that mark whether or not an utterance is generic (e.g., "Birds fly" vs. "The birds fly"; Gelman & Raman, 2003). Additionally, there are language-specific devices that convey essentialism. For example, young Spanish-speaking children make inferences about the stability of

a category based on which form of the verb "to be" is used to express it (*ser* versus *estar*; Heyman & Diesendruck, 2002). Although it is unlikely that language is the source of psychological essentialism, it provides important cues to children regarding when to treat categories as stable and having an intrinsic basis.

Conclusion

Preschool children and adults from a variety of cultural contexts expect members of a category to be alike in non-obvious ways. They treat certain categories as having inductive potential, an innate basis, stable category membership, and sharp boundaries. The implications of essentialism span widely, as seen in the examples that started this piece. Essentialized categories include not only biological species, but also social categories and traits (Giles, 2003; Heyman & Gelman, 2000a, 2000b; Yzerbyt, Judd, & Corneille, 2004; Haslam, Bastian, & Bissett, 2004). These beliefs are not the result of a detailed knowledge base, nor are they imparted directly by parents, although language may play an important tacit role. Instead, they appear early in childhood with relatively little direct prompting.

Although I have provided a framework of "psychological

essentialism" to account for these data, numerous questions and debates remain unresolved. To what extent is essentialism a single, coherent theory, as opposed to a disparate collection of beliefs? Do people invoke essences per se, or something less committal (Stevens, 2000; Ahn, Kalish, Gelman, Medin, Luhmann, Atran, Coley, & Shafto, 2001)? Why do children often appear to rely on superficial features, despite their sensitivity to non-obvious properties in the tasks described here (e.g., Sloutsky, 2003; Smith, Jones, & Landau, 1996)? Some scholars have argued that essentialism cannot account for certain experimental findings regarding adult word meaning (Malt, 1994; Sloman & Malt, 2003; Braisby, Franks, & Hampton, 1996). For example, the extent to which different liquids are judged to be water cannot be fully explained by the extent to which they share the purported essence of water, H₂O. Whether these findings undermine (or even conflict with) psychological essentialism is a matter of current debate (Gelman, 2003; Rips, 2001).

Many questions remain for future research. Ongoing investigations examine: developmental antecedents to essentialism in infancy (Graham,

Continued on page 14...

to international students or visitors, and there are concerns that scientific talent is going elsewhere. A number of recommendations to ease visa issues include extending visa validity to cover the entire time of an academic appointment, allowing multiple entries, and so on. The societies also call for development of a national strategy to promote academic and scientific exchange

In addition to visa issues, the statement also addresses a restriction that has caused consternation among some science disciplines whereby foreign scholars require licenses to have access to specialized scientific equipment.

How do these visa and access issues affect psychology? We do not have a ready answer to this question

because there are no good data on the numbers of international students, postdocs or visitors in psychology departments in the US. However, it is clear that current initiatives to internationalize psychology curricula, to make international psychological literature more visible, and to foster cross border exchanges underscore an increased interest in an international and internationalized psychology. To support this interest, and to ensure cutting edge development, it is important for psychology, as for other sciences, to support the free circulation of science and of scientists.

In a press release announcing the statement, Association of American Universities President, Nils Hasselmo said, "If our nation is to remain the world's leader in science and

innovation, we must continue to encourage the contributions made by international students, scientists, and engineers..."; and Albert Teich, Director of science and policy programs for the American Association for the Advancement of Science (AAAS) added "Foreign students and visitors are a hugely valuable asset for the United States. Not only do we benefit from those who ultimately may decide to apply for immigrant visas and stay in this country, but we gain equally from those who return to their home countries and remain connected to us through collaborations, friendships and common interests. U.S. visa policies need to be calibrated to restore the image, and the reality, of the U.S. as a welcoming nation."

Fostering Psychological Science Through Working at APA—Unique Opportunities

by Merry Bullock

Ever wanted to work in Washington? Over the next few months the Science Directorate anticipates several exciting opportunities to help support and promote psychological science through new staff openings. The move by Associate Executive Director Merry Bullock to the Office of International Affairs, a new emphasis on applied psychology, and increased Psy21 activities all mean new opportunities for PhD level psychologists that may appeal to you or your students. With Bullock's departure, two Assistant Executive Director positions are being crafted. The purview of one will be the Science Directorate's leadership and governance focus—including APA's science governance activities, its attempts to promote a culture of service, visits to academic departments, and outreach about academic and non-academic research careers. The purview of the other will be APA's activities addressing research and infrastructure—including animal research, IRB and related research subject protection issues, and research needs such as data sharing and archiving, interdisciplinary 'big science' and the like. In addition, incumbents in each position will represent APA and psychology in a number of policy and program venues, and join with the rest of the Science team in sponsoring the Science Leaders conference, and fulfilling the Science Directorate's many

outreach and advocacy functions. In addition to these two positions, the Science Directorate anticipates openings focused on developing a strong applied psychology constituency, and outreach to research oriented students. Please watch the Monitor and the APA-Science web pages (www.apa.org/science) and contact Science Executive Director Steven Breckler (sbreckler@apa.org) for more information.

Bullock to move to the Office of International Affairs



On June 1, Associate Executive Director for Science, Merry Bullock, will move from the Science Directorate to assume the position of Senior Director for International Affairs. Executive Director Steve Breckler noted "of course, we are very sorry to see her leave, but we are glad that APA will continue

to benefit from her enthusiasm and expertise." Says Bullock, "this new position is an extension of what I have been doing - championing psychology, and finding ways to involve psychologists in its programs, issues and advocacy. I am very excited to do this with the broadest possible horizons - across borders and for the whole of psychology. I invite you all to send me your thoughts and concerns at mbullock@apa.org."

PSY21

Psychological Science for the 21st Century

...Science Brief,
continued from page 12

Kilbreath, & Welder, 2004; Welder & Graham, in press), the relation between perceptual and conceptual information in children's categories (Rakison & Oakes, 2003), individual differences in essentialism (Haslam & Ernst, 2002), contexts that foster or inhibit essentialism (Mahalingam, 2003), links to stereotyping or prejudice (Bastian & Haslam, in press), and how best to model these representations in formal terms (Ahn & Dennis, 2001; Rehder & Hastie, 2004).

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14

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Continued on page 15...

...Science Brief,

continued from page 14

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