



NIH Working Group on Basic Behavioral and Social Science Research Reports at Advisory Committee Meeting

by Pat Kobor, Senior Science Policy Analyst

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The Advisory Committee of the Director of NIH heard a presentation December 2, 2004, on the recently released draft report of the NIH Working Group on Basic Behavioral and Social Sciences Research. Working Group members Susan Fiske, Robert Levenson, and Bruce McEwen, along with chair Linda Waite, presented the draft report and its recommendations to the NIH Director and his advisory committee. The Working Group was established in 2003 by NIH Director Elias Zerhouni with the charge to review the portfolio of basic behavioral and social science research funded by NIH and to make recommendations on how to strengthen basic research.

The Working Group released an inventory of basic behavioral and social research in each of the NIH institutes that reported supporting it, with titles of some grants shown as examples. It also released a report with recommendations on how to strengthen basic research. Those recommendations were: 1) Task the NIH Office of Behavioral and Social Sciences Research (OBSSR) with coordinating trans-institute basic research initiatives, and 2) to designate a home for basic research that is not differentiated by disease by establishing a branch or a program in a non-categorical institute (either the National Institute of General Medical Sciences, which funds basic research; the National Institute of Child Health



and Human Development; or the National Institute on Aging).

While the latter recommendation technically overreached the group's charge, Waite explained to the Advisory Council that undifferentiated basic research needs a home at NIH, especially now that the National Institute of Mental Health (NIMH) is refocusing its research portfolio toward translational research. Several NIH institutes support

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Applications Now Available for 2005 Advanced Training Institutes

2005 will mark the sixth year of this highly successful program, featuring training seminars on fMRI (where this year's focus will be on clinical applications), structural equation modeling, and using large-scale databases, featuring the NICHD's Study of Early Child Care. Please go to www.apa.org/science/ati.html for more information, and to apply.

The ATI on large-scale databases will be held from June 7-10 in Chapel Hill, North Carolina. Participants will learn to use longitudinal data from NICHD's Study of Early Child Care (SECC). The SECC data are from 1,364 families, followed since their infants' birth in 1991. The study covers demographic, family, maternal, paternal and caregiver characteristics; child social and emotional outcomes; language development; cognitive skills; school readiness; growth and health measures, and much more. Through a grant from NICHD, training institute costs for transportation, lodging, food and materials will be covered.

The fMRI course is run by Robert L. Savoy, Director of fMRI Education at Massachusetts General Hospital, and will be held at the hospital's Martinos Center for Biomedical Imaging, just outside of Boston. It will be held from June 19-24. Most expenses are paid for invited applicants, thanks to a grant from NIMH.

The ATI on structural equation modeling in longitudinal research will also be held in June, exact dates to be determined. This course is taught by Jack McArdle at his home institution, the University of Virginia. This training covers a range of topics, including fundamental measurement problems, dealing with incomplete data, and new techniques for dynamic analyses. Course materials will include basic readings on the fundamental theoretical issues in contemporary longitudinal data analysis. These materials will also include all computer scripts (e.g., AMOS, LISREL, Mplus, Mx) used in the practical applications. Participants will be encouraged to bring along their own data and research problems, and time will be set aside daily for individual meetings with members of the faculty.

Two more ATIs are being planned (at the time of this writing, one on conducting online experiments, and another on behavioral genetics) so please check back over the winter to www.apa.org/science/ati.html for more information and applications. ■

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basic research, but even though basic questions are being addressed, they are often posed in populations reflecting, or within the context of, the disease mission of those institutes. Waite characterized the first recommendation as encouraging basic research in a "top-down" approach, through Requests for Applications, and the second as a means to provide a stable home where investigator-initiated basic research would be welcomed.

Zerhouni and the advisory committee expressed several concerns about the second recommendation. Some advisory committee members asked why NSF was not the more appropriate home for this type of basic behavioral and social science research. Zerhouni noted the tightening budgets at NIH and appeared to question why he or the advisory council ought to dictate to any institute what sort of research it should fund. He didn't question the importance of the research, but noted that the amount of basic research tallied in

the report, approximately \$936 million, was not an insignificant amount of money. The Working Group members noted that the inventory they developed showed that almost all examples of basic research included in the \$936 million were projects posed within the context of the disease missions of the institutes. The challenge in the meeting was to explain why undifferentiated basic behavioral and social science was as relevant to health as, for example, undifferentiated research on cellular function.

The presenters attempted to answer the concerns posed by Zerhouni and other members of the Advisory Council. Fiske pointed out that there is a strong body of research on how lack of social support adversely affects cardiac patients. While NIH has supported this applied research, she questioned whether today's NIH would support basic research on social isolation and social support that made the clinical research possible.

Even if the reception by the Advisory Committee was more tentative than hoped, APA and other organizations will share the Working Group's recommendations with congressional allies and discuss them with individual institutes to see if a more welcoming climate can be established for basic behavioral and social sciences research at NIH. While the report is still in draft form now, the Director's Advisory Committee is expected to discuss its approval before the committee's next meeting in June 2005.

The draft report and inventory are online at http://obssr.od.nih.gov/Activities/Basic%20Beh%20Report_complete.pdf. For additional information, see: Membership of the NIH Director's Advisory Committee at <http://www.nih.gov/about/director/acd.htm> and the Charge to the Working Group on Basic Behavioral and Social Sciences Research at <http://obssr.od.nih.gov/Activities/BasicResearch.html>. ■

EXECUTIVE DIRECTOR'S COLUMN

STEVEN BRECKLER, Executive Director for Science

Who Speaks for Our Science?

When it comes to psychological science, most of us spend most of our time doing the science. We devote ourselves to acquiring, refining, and expanding a repertoire of scientific skills, we immerse ourselves in a scientific literature, we design and conduct studies to answer important questions, we share our results with other scientists, and we train new generations who will carry our science forward.

The health of our discipline clearly depends on individuals who choose to pursue the life of a scientist, often at great personal sacrifice. Yet, to grow and to prosper in the 21st century, science also depends on those who can represent us – on those who are able to speak on behalf of the discipline. Who will press congress and the funding agencies to make sure that money is available to support our research? Who will defend our science when it becomes the target of partisan political attacks? Who will promote our science and see to it that policy and society is informed by and benefits from our collective progress?

The important work of speaking for our science often falls to individuals. Some of us like to do this, and some of us are especially good at it. Those who nurture positive relationships with the media, who are gifted in writing for the popular press, who are effective in political arenas – they speak for our science. Very often, psychological science is only one of many potential scientific stakeholders who might have a seat at the table. It is vitally important that our science be represented at that table by able members of our own scientific community.

Consider the direction in which the federal funding agencies are heading – the big money at NSF and NIH is



going to multidisciplinary projects with large teams of investigators who are assembled to tackle big problems. Much to their credit, NSF and NIH depend on a well-developed peer-review process to help make the big funding decisions. Those peer reviewers speak on behalf of their disciplines – they assess the merit of the science that falls within their areas of expertise. If psychological science is – or should be – one of the disciplines participating in a multidisciplinary project, then we need peer reviewers who will speak on behalf of our discipline.

Or consider that national policy is typically shaped by advisory boards and panels. For example, the National Academy of Sciences (NAS) produces influential reports and studies that bring science to bear on important societal questions. Psychological science is not likely to be represented unless psychological scientists participate and speak on our behalf. NSF and NIH are guided at the highest levels by Boards and Councils that include representation of the major relevant disciplines. When psychologists are appointed to these groups, someone is able to speak on our behalf. At the risk of leaving someone out, I can point to three very recent appointments that should make psychology very proud:

Alan Leshner was just appointed to the National Science Board

Roxane Cohen Silver sits on the Homeland Security Advisory Committee

Baruch Fischhoff sits on the Homeland Security Science and Technology Advisory Committee

All three of these scientists identify with psychology as a disciplinary home, all three are Fellows of APA, and all three give our discipline an important voice. We also organize ourselves – in very deliberative and formal ways – to create structures that speak on our behalf. Scientific societies and professional organizations are created chiefly for this purpose. These groups even organize themselves into larger entities, because in larger numbers there is even greater strength and visibility.

Large associations, such as APA or the American Psychological Society (APS), speak for our science through advocacy, education, and communication efforts. These groups establish scientific journals, they maintain an active and vigorous presence on Capitol Hill and at the federal agencies, and they sponsor meetings, workshops, and conferences. Smaller scientific associations also speak for psychology through their journals and convening functions. Very often, however, these smaller groups do not have the resources they need to engage in advocacy or legislative activity – to speak for psychology in important federal venues. However, they do have the ability to pool their resources in pursuit of an advocacy agenda. Two good examples relevant to psychology include:

The Federation of Behavioral, Psychological, and Cognitive Sciences – a group of 18 scientific societies who are able to speak as one larger voice on behalf of psychology and cognitive science.

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Senate Confirms New Director of NSF and Psychologist for National Science Board

by Heather O'Beirne Kelly, Senior Legislative and Federal Affairs Officer

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On November 20th, the Senate confirmed appointments of eight scientists to the National Science Board (NSB), the 24-member independent body designated by Congress to oversee and establish policies for the National Science Foundation (NSF) and provide advice to the President and Congress on science and engineering issues. Prominent among this group is Alan I. Leshner, the first psychologist to serve on the NSB in several decades.

Leshner, a Fellow of APA and current Chief Executive Officer of the American Association for the Advancement

of Science (AAAS), will serve through May, 2010. He noted: "I'm delighted by this appointment. NSF is a wonderful agency that serves a vital role in the advancement of science worldwide. I look forward to bringing my training in and perspective from psychology and neuroscience to the National Science Board's important policy discussions."

President Bush's nominee for Director of NSF, Arden L. Bement, Jr., also received Senate confirmation for a period of six years, during which time he will serve in an ex officio capacity on the NSB. Bement has served as NSF's Acting Director since February,

2004, while he continued to serve as the Director of the National Institute of Standards and Technology (NIST) within the Department of Commerce (his NSF appointment coincides with official resignation from his position at NIST). Bement, an engineer by training, has had a long career in industry, government and academia. He faces immediate challenges at NSF in terms of resources (one of his stated priorities), particularly in light of funding cuts to the agency in the Fiscal Year 2005 budget up for final congressional approval in the December lame duck session. ■

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The Consortium of Social Science Associations (COSSA), an advocacy organization supported by more than 100 professional associations, scientific societies, universities and research institutions. COSSA brings psychology together with such disciplines as sociology, political science, economics, geography, communications, statistics, and education research to pursue a common advocacy agenda.

APA is an active member of both of these groups. We certainly have our own resources to support a full advocacy, education, and communication program on behalf of psychology. We support these groups, and others, because we believe firmly that multiple voices are better than one, that different perspectives need the opportunity to speak on our behalf, that in greater numbers there is greater power. When we ask who speaks for psychology, the answer is that we all do. Some among us speak as individuals, and others as members of the chorus. Either way, it gives psychology a powerful voice indeed. ■

Science Policy Insider News

What is SPIN?

- APA's Science Policy staff wants you to know about the important policy issues that affect psychological science and psychological scientists at the national level.
- The Science Policy staff advocates for psychological science not just with members of Congress, but also the Departments of Defense, Health and Human Services, Transportation, Veterans Affairs, Education and with the National Aeronautics and Space Administration and National Science Foundation. To keep you aware of science policy within these agencies and on Capitol Hill, we have created APA's Science Policy Insider News (SPIN), a monthly email newsletter that will take you inside the Administration and Congress for timely information from your APA staff.

• Visit SPIN at <http://www.apa.org/ppo/spin>.

SCIENCE BRIEFS

Oh Where, Oh Where Have Those Early Memories Gone?

A Developmental Perspective on Childhood Amnesia

by Patricia J. Bauer

Patricia J. Bauer earned her PhD in Experimental Developmental Psychology from Miami University in 1985. She was a postdoctoral fellow at the University of California, San Diego (1985-1989), and then joined the faculty of the Institute of Child Development, University of Minnesota (since 1989), where she is currently the Rodney S. Wallace Professor for the Advancement of Teaching and Learning. As of July, 2005, she will be joining the faculty of the Department of Psychological and Brain Sciences at Duke University. Her research program is in developmental cognitive science, with particular emphasis on memory. She is especially concerned with development in infancy and early childhood, and with relations between functional changes and neuro-developmental changes. Beyond early childhood, she focuses on the questions of how changes in basic mnemonic processes, and how the socio-cultural environment in which development takes place, contribute to age-related changes and to individual variability in autobiographical or personal memory. She has published over 90 articles and chapters and is author of the forthcoming volume *Remembering the times of our lives: Memory in infancy and beyond* (Erlbaum). Professor Bauer is the 1993 recipient of the APA Distinguished Scientific Award for Early Career Contribution to Psychology in the Developmental Area, has an Independent Scientist Award from the National Institutes of Health, is Editor of the *Journal of Cognition and Development*, and is past president of the Cognitive Development Society.

"The horror of that moment," the King went on, "I shall never, never forget!" "You will, though," the Queen said, "if you don't make a memorandum of it."

(Lewis Carroll, *Through the Looking Glass and What Alice Found There*, 1872, emphasis in original)

In his brief dialogue between the King and the Queen—two of the chess-piece sovereigns of Looking-glass House—Lewis Carroll captured the complementary sides of the memory coin. The King, having experienced an "horrifying" event (being set upon a table by Alice, a relative giant whom the King could neither see nor hear) expresses absolute faith in remembering. The Queen, on the other hand, is less optimistic, suggesting that without some intervention (a memorandum) forgetting will ensue. In a rare instance, the reality experienced by the King and Queen on their side of the looking glass is reflected on the drawing-room side as well. Memory is at times seemingly indelible and at other times frustratingly fallible. What

is more, in true looking glass fashion, the same past experience can at one moment impinge upon consciousness unbidden and at another, elude deliberate attempts to recollect it.

Whereas memories of many past experiences seemingly come and go, there is a period of life from which adults reliably fail to recall much if anything at all. Well over 100 years ago, Miles (1893) published the first account in a psychological journal of the phenomenon that would come to be known as infantile amnesia or childhood amnesia: the relative paucity among adults of verbally accessible memories from the first 3-4 years of life. The phenomenon was subsequently amended with the observation that from the ages of 3 to 7 years, adults have fewer memories than would be expected, based on forgetting alone (e.g., Pillemer & White, 1989; Wetzler & Sweeney, 1986). The observation is one of the most replicable in the literature: Whether tested in 1893 or 1999 (West & Bauer, 1999), among adults in Western cultures, the

average age of earliest memory is age 3 to 3½ years.

A number of theories as to the source of childhood amnesia have been advanced. Perhaps most infamously, Freud (1916/1966) attributed "the remarkable amnesia of childhood" to repression of inappropriate or disturbing content of early, often traumatic (due to their sexual nature) experiences. Most other theories fall into one of two categories: adults lack memories from early in life because no memories were formed or memories were formed, but later became inaccessible as a result of cognitive changes, for example (e.g., the onset of language). Strikingly, until the middle of the 1980s, explanations as to the source of childhood amnesia were advanced without reference to data from a seemingly critical study population—children! Conclusions about memory in children were drawn nonetheless. An illustrative (though by no means isolated) example is Kihlstrom and Harackiewicz's (1982)

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observation that "...despite the wealth of experiences which young children have, their autobiographical records are typically quite fragmentary before age seven, and the earliest memory is rarely dated before age three" (p. 134). This characterization was offered in an article in which none of the 37 references was to research with human children (though some research on the ontogeny of memory in nonhuman animals was cited).

6 The reasons for the lack of attention to children's memories were both theoretical and empirical. The dominant model—Piagetian theory—suggested that it was not until children were of school age that they formed coherent memories of past events. The perspective seemed to be born out empirically. When children were tested with standard laboratory materials (e.g., lists of unrelated words), they performed poorly. They appeared to become reasonably skilled mnemonists at just about the same time as adults begin to have reliable autobiographical records, namely, age 7 years. However, the ground breaking work of researchers such as Jean Mandler and Katherine Nelson made clear that such tasks grossly underestimated children's mnemonic competence. When preschoolers were tested with materials that were inherently structured and meaningful—such as well formed stories (e.g., Mandler & Johnson, 1977) and familiar, "scripted" events (e.g., what happens at a fast food restaurant: e.g., Nelson, 1978)—their memories were well organized and accurate, albeit not as detailed as those of older children and adults.

Observations of preschoolers' abilities to recall stories and report on scripted events opened the door for inquiries into their abilities to recall the stuff of which autobiographical memories are made, namely, unique events from the personal past. Beginning in the middle 1980s, several research laboratories walked through the door. Robyn Fivush and her colleagues (Fivush, Gray, & Fromhoff, 1987) published one of the

first reports of autobiographical recall by children only 2½ years of age. The children provided verbal descriptions of unique events experienced 6 or more months in the past. Several other reports followed, each indicating that within the period eventually obscured by childhood amnesia, children had remarkably rich autobiographies (for reviews, see Bauer, in press-b; Nelson & Fivush, 2004).

Not only were preschoolers found to remember but, using imitation-based tasks, researchers revealed mnemonic competence in children even before they could talk (Bauer, 2004). In imitation-based tasks, children watch an adult use props to produce an action or sequence of actions that children then are invited to imitate. There are numerous reasons to believe that the technique provides a nonverbal analogue to explicit memory tasks such as verbal report, including findings of impairments in imitation by individuals with both adulthood- and childhood-onset medial temporal lobe amnesia (McDonough, Mandler, McKee, & Squire, 1995, and Adlam, Vargha-Khadem, Mishkin, & de Haan, in press, respectively; see Bauer, 2005, for elaboration of the argument). Infants remember the actions of sequences, the objects used to produce them, and the order in which the actions unfold, and thus reveal episodic precursors of autobiographical memory. Moreover, at least by the middle of the second year, the memories are retrievable after weeks and even months and thus are relatively enduring.

If preschoolers and even infants remember unique events over long periods of time, why then as adults are we unable to recall early childhood? The answer likely lies in the complement of remembering, namely, forgetting. Forgetting is in fact a critical component of the definition of childhood amnesia: a smaller number of memories from before the age of 7 years than would be expected based on forgetting alone. Indeed, it is the apparently "off the charts" rate of forgetting that makes the phenomenon so mysterious. But

what, precisely, is the "expected" rate of forgetting? In a research area in which theories about function in childhood were advanced in the absence of data from children, it is perhaps not surprising to learn that the "expected" rate of forgetting is derived solely from work with adults. For example, in their oft-cited demonstration of the phenomenon of childhood amnesia, Wetzler and Sweeney (1986) applied to adult data (from Rubin, 1982) a forgetting function based on memories from age 8 until adulthood. They then applied the function to data from birth to age 6 years. The good fit of the function to the later data and its poor fit to the early data provided the evidence of accelerated forgetting of events from the early childhood years (see also Crovitz & Schiffman, 1974; Rubin, Wetzler, & Nebes, 1986).

Application of the adult standard to data from early childhood was considered acceptable because of a widely held assumption that the rate of forgetting is a constant across the lifespan (e.g., Rubin & Wenzel, 1996). Yet as evidence of young children's mnemonic prowess has grown, so too have reasons to expect developmental differences in the rate of forgetting, especially in the period eventually obscured by childhood amnesia. Although from a relatively young age, children retain memories over long periods of time, younger children nevertheless exhibit faster rates of forgetting, relative to older children (e.g., Bauer, 2004; in press-a). Differential rates of forgetting are apparent in infancy and very early childhood as well as in the preschool years. They likely are linked to neurodevelopmental changes that make memories formed in early childhood more vulnerable to consolidation and storage failures, relative to memories formed later in life (see Bauer, 2004, for a review).

From the standpoint of theories as to the source of childhood amnesia, the implications of age-related differential rates of forgetting could be profound. It is entirely likely that were we to fit

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data based on early-childhood rates of forgetting, rather than adult rates, we would find that the observation of "...accelerated forgetting over and above normal forgetting..." (Wetzler & Sweeney, 1986, p. 194), would disappear, and the number of memories from early in life would be exactly as expected. Unfortunately, at this time, this possibility cannot be put to empirical test because we lack systematic studies of children of different ages, tested after long retention intervals, for memories of personally significant events. I expect that if we had them, we would see that within the period of childhood, memories formed at age 8 years and older would be forgotten at a slower rate, relative to memories formed at the ages of 4 and 6 years, for example. Until such data are available, all we know is that the forgetting function that fits retrospective data collected from adults for life events from age 8 years onward does not fit the data from age 6 years and younger.

The question of "Oh where, oh where have those early memories gone?" has occupied autobiographical memory researchers for well over a century. Most of the speculation has been from a decidedly non-developmental perspective. When the distribution of events remembered and events apparently forgotten is examined through adult lenses, it appears that an explanation for accelerated forgetting of events from the early years is required. However, when we look forward through developmental lenses, what we see is that with increasing age, rates of remembering and forgetting begin to approximate those in adulthood. What this perspective lacks in glamour and mystery, it makes up for by permitting us to see the continuity of autobiographical memory that may otherwise be obscured. Continuity is itself a precious commodity. In the words of D. Ewen Cameron (1963):

Intelligence may be the pride—the towering distinction of man; emotion gives colour and force to his actions; but memory is the bastion of his being. Without memory, there is no personal

identity, there is no continuity to the days of his life. Memory provides the raw material for designs both small and great. Thus, governed and enriched by memory, all the enterprises of man go forward (p. 325). ■

References

- Adlam, A.-L. R., Vargha-Khadem, F., Mishkin, M., & de Haan, M. (in press). Deferred imitation of action sequences in developmental amnesia. *Journal of Cognitive Neuroscience*.
- Bauer, P. J. (in press-a). Developments in declarative memory: Decreasing susceptibility to storage failure over the second year of life. *Psychological Science*.
- Bauer, P. J. (in press-b). *Remembering the times of our lives: Memory in infancy and beyond*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Bauer, P. J. (2004). Getting explicit memory off the ground: Steps toward construction of a neuro-developmental account of changes in the first two years of life. *Developmental Review*, 24, 347-373.
- Bauer, P. J. (2005). New developments in the study of infant memory. In D. M. Teti (Ed.), *Blackwell Handbook of Research Methods in Developmental Science* (pp. 467-488). Oxford, United Kingdom: Blackwell Publishing.
- Cameron, D. E. (1963). The processes of remembering. *British Journal of Psychiatry*, 109, 325-340.
- Carroll, Lewis (1872/1982). *Through the Looking Glass and What Alice Found There* (p. 94 of *The Complete Illustrated Works of Lewis Carroll*, New York: Crown Publishers Inc, 1982).
- Crovitz, H. F., & Schiffman, H. (1974). Frequency of episodic memories as a function of their age. *Bulletin of the Psychonomic Society*, 4, 517-518.
- Fivush, R., Gray, J. T., Fromhoff, F. A. (1987). Two-year-olds talk about the past. *Cognitive Development*, 2, 393-409.
- Freud, S. (1916/1966). The archaic features and infantilism of dreams. In *Introductory lectures on psychoanalysis*. Translated and edited by J. Strachey. New York: Norton.
- Kihlstrom, J. F., & Harackiewicz, J. M. (1982). The earliest recollection: A new survey. *Journal of Personality*, 50, 134-148.
- Mandler, J. M., & Johnson, N. S. (1977). Remembrance of things parsed: Story structure and recall. *Cognitive Psychology*, 9, 111-151.
- McDonough, L., Mandler, J. M., McKee, R. D., & Squire, L. R. (1995). The deferred imitation task as a nonverbal measure of declarative memory. *Proceedings of the National Academy of Sciences*, 92, 7580-7584.
- Miles, C. (1893). A study of individual psychology. *American Journal of Psychology*, 6, 534-558.
- Nelson, K. (1978). How young children represent knowledge of their world in and out of language. In R. S. Siegler (Ed.), *Children's thinking: What develops?* (pp. 255-273). Hillsdale, NJ: Erlbaum.
- Nelson, K., & Fivush, R. (2004). The emergence of autobiographical memory: A social cultural developmental theory. *Psychological Review*, 111, 486-511.
- Pillemer, D. B., & White, S. H. (1989). Childhood events recalled by children and adults. In H. W. Reese (Ed.), *Advances in child development and behavior, Volume 21* (pp. 297-340). Orlando, FL: Academic Press.
- Rubin, D. C. (1982). On the retention function for autobiographical memory. *Journal of Verbal Learning and Verbal Behavior*, 21, 21-38.
- Rubin, D. C., & Wenzel, A. E. (1996). One hundred years of forgetting: A quantitative description of retention. *Psychological Review*, 103, 734-760.
- Rubin, D. C., Wetzler, S. E., & Nebes, R. D. (1986). Autobiographical memory across the adult lifespan. In D. C. Rubin (Ed.), *Autobiographical memory* (pp. 202-221). Cambridge: Cambridge University Press.
- West, T. A., & Bauer, P. J. (1999). Assumptions of infantile amnesia: Are there differences between early and later memories? *Memory*, 7, 257-278.
- Wetzler, S. E., & Sweeney, J. A. (1986). Childhood amnesia: An empirical demonstration. In D. C. Rubin (Ed.), *Autobiographical memory* (pp. 191-201). New York: Cambridge University Press.

Interesting Careers Science Reporter

Laura Helmuth, PhD., Smithsonian Magazine

As a science reporter, I've needed some of the same skills you learn in grad school: how to keep up with the latest research, draw interesting connections among various studies, ask key questions, and navigate a crowded poster session. Becoming a science writer and eventually a science editor feels like a smooth process in retrospect, but of course it took some time and a bit of agonizing. I started out as a chemistry, or maybe philosophy, or maybe biology major at Eckerd College in St. Petersburg, Florida. One of the advantages of being at a small, liberal arts college was that I could design my own course of study. I took a lot of psych classes and other science classes and called the combination a biological psychology major. I got a Ford Foundation undergraduate research grant and did a small study on stress. I expected to be doomed to go to med school, but somewhere along the way I figured out what grad school was (Eckerd didn't have grad students, and I wasn't at all clear on what a PhD meant), and research sounded like a much more fulfilling career.

I had a great time in grad school at the University of California, Berkeley. I was in the psych department studying cognitive neuroscience, but I also took a lot of classes and went to a lot of talks in other departments: linguistics, philosophy, molecular and cell biology, zoology, even paleontology. That was a clue: as much as I enjoyed my research, and as well as it was going, I didn't want to concentrate on any one field to the exclusion of others. I also took on a lot of different projects, and I got a grant to study for one year at a lab in Germany – all signs of an attention span that was probably too short for academia.

One summer, I got a job writing for a travel guide. I'd never written for the public before (only for scientific publications), but I caught on quickly and enjoyed the process, despite the gruel-



Photo by Molly Roberts

ing hours and constant hassle of trying to find out everything a traveler could possibly need to know about Slovakia and the Czech Republic. After that, I decided that being a writer would be an even more rewarding career than being a scientist. I took journalism classes at Berkeley while finishing up my dissertation, and then I entered the University of California, Santa Cruz, science writing program.

Like science, journalism usually requires a long apprenticeship phase. I interned at a newspaper in Salinas, California, called *The Californian*, while in the UC Santa Cruz program. Then I interned at a Department of Energy lab in Idaho, then *Science News* magazine in Washington, D.C., and finally *Science* magazine's news department (which is independent of its scientific publications side).

My first job-job was at *Science*. I wrote about life sciences research part-time, which meant that I kept up with major journals, attended five or more scientific conferences each year, read a lot of press releases from professional organizations and universities, and pulled together story ideas that I proposed to the editors of the maga-

zine. For the other half of my time, I edited *Science*'s online daily news site, *ScienceNOW*. I scoured journals for papers that would make for amusing or important short news stories, evaluated story ideas that freelancers proposed, and edited three to five stories each day. After a few years, I took a job as an editor in the news department of *Science*. As an editor, I got to help decide which stories the magazine would cover and which writers would write them—as I had done for *ScienceNOW*, but for a wider audience and handling much longer stories.

Editing requires some of the same skills as reporting, but it also calls upon some management and social skills that psychologists should be familiar with. Working with freelance writers, in particular, can be a bit like doing pro bono therapy. Some are crippled by insecurities and need encouragement, others have a hard time meeting deadlines, and others work at home and just need to make some human contact with their editor.

In 2004, I took a job as science editor of *Smithsonian Magazine*. I'm responsible for all of our science, nature and environment coverage. It's been a challenge to venture from fields I know well, like neuroscience and social sciences, and to figure out how to cover, say, geology and physics. Here it's not enough for a story to explain new and important scientific findings—our stories also have to have compelling narratives, colorful characters, interesting scenes, and be photogenic. My job is to make stories about science appeal to the non-scientist. ■

December 2004 Announcements

Abrams Named Director of NIH Office of Behavioral and Social Sciences Research

NIH announced that psychologist David Abrams of Brown University has been named Associate Director for Behavioral and Social Sciences, and Director of the NIH Office of Behavioral and Social Sciences Research. He will begin his appointment in January of 2005. Visit the NIH news release online at <http://www.nih.gov/news/pr/dec2004/od-09.htm> and read our profile of Dr. Abrams in the January issue of the PSA.

Elizabeth Loftus Chosen for 2005 Grawemeyer Award

Elizabeth Loftus, noted for her study of human memory and how it can be altered, has won the 2005 University of Louisville Grawemeyer Award for Psychology. She will receive a \$200,000 prize. Loftus' research on false recollections, the reliability of eyewitness reports, and memories "recovered" through therapy has affected the way law enforcement agencies and the court system views such testimony. Her research has shown that people not only forget but also falsely remember, meaning that they sincerely and vividly can recall events that never happened when information suggested to them becomes entwined with their memory of what actually happened. The individual may not be able to separate the real threads of memory from the added strands of suggestion.

Her many honors include the American Psychological Association (APA) Distinguished Scientific Award for the Applications of Psychology, the American Psychological Society (APS) William James fellow award and the James McKeen Cattell fellow award for lifetime contributions. She was elected to the National Academy of Sciences, the American Academy of Arts and Sciences, and the American Academy of Political and Social Sciences. The University of Portsmouth in England endowed a research dissertation prize in forensic psychology in her name this year.

Loftus is a distinguished research professor at the University of California-Irvine, with positions in its psychology and social behavior department, criminology, law and society department and cognitive sciences department. She is also a fellow of UCI's Center for the Neurobiology of Learning and Memory. She earned her doctoral (1970) and master's (1967) degrees from Stanford University. She served on the New School University's graduate faculty before joining the University of Washington's faculty in 1973; she taught psychology and law at the University of Washington for 29 years. Loftus has served as a consultant for the U.S. Department of Justice, U.S. Secret Service, Internal Revenue Service, Federal Trade Commission, General Services Administration, and the Law Reform Commission of Canada.

Each year the Grawemeyer Foundation awards a total of \$1 million for powerful ideas or creative works in the sciences, arts and humanities. The awards were begun by Charles Grawemeyer, an industrialist, entrepreneur and a University of Louisville graduate. His goal was to reward powerful ideas or creative works rather than personal achievements.

APA Science Student Council Call for Nominations

The APA Science Student Council (APASSC) is seeking graduate students to serve as representatives of the following areas:

- Biopsychology
- Cognitive Psychology
- Developmental Psychology
- Quantitative Psychology

Each representative is required to serve a two year term, from January 2005 through December 2006. During that time representatives are expected to attend four meetings in Washington, DC, and to contribute to Council activities intermittently throughout the year. For more information on the APASSC, please visit its website at <http://www.apa.org/science/apassc-web.html>. If you have specific questions about service on the Council, please email them to scistudent@apa.org.

In order to nominate a candidate, please send a CV, recommendation letter from the candidate's advisor, a brief (no more than two pages) statement of research interests, and a brief (no more than two pages) statement on why the candidate is interested in serving on the Council to:

APA Science Directorate
APASSC Nominations
750 First Street NE
Washington, DC 20002-4242

Self-nominations are welcome. The deadline for receipt of nominations is **December 20, 2004**.

APA Summer Research Programs Ready for Applicants!

February 2005 deadlines have been set for the APA Science Directorate's two summer research experiences for undergraduates. The Summer Science Institute (SSI), now in its 10th year, and the Advanced Statistical Training in Psychology (ASTP), new in 2004, will be open for applications beginning December 1, 2004.

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Applications for SSI, to be held at Vanderbilt University June 18-26, 2005, will be accepted until **February 8, 2005**. The SSI is a 9-day intensive program designed to immerse students in the science of psychology. The Institute gives students an opportunity to explore the intellectual, personal, and social processes of scientific inquiry and to experience cutting-edge psychological research through seminars and hands-on laboratory activities. Visit www.apa.org/science/ssi.html for complete details about the program and online application.

The ASTP will be held at the University of Maryland July 9 – 17, 2005. Applications will be accepted until **February 23, 2005**. ASTP is an intensive, hands-on seminar in which students learn about psychological statistics and research methods in a dynamic setting that emphasizes the skills it takes to analyze and interpret real data. Much of the statistical instruction will be geared toward the use of computer-assisted statistical packages (SPSS). ASTP will target students from traditionally underrepresented groups in psychology. The definition of underrepresented groups for this program is extremely broad. The seminar will undoubtedly include students who are members of ethnic minority groups, but it will also include first generation college students and students who have had to overcome other kinds of social, physical or economic barriers on the road to academic excellence. Please visit www.apa.org/science/astp.html for online application and more program information.

Call for Nominations: Meritorious Research Service Commendation

The APA Board of Scientific Affairs (BSA) is soliciting nominations for the Meritorious Research Service Commendation. This commendation recognizes individuals who have made outstanding contributions to psychological science through their service as employees of the federal government or other organizations. Contributions are defined according to service to the field that directly or indirectly advances opportunities and resources for psychological science. This may include staff at federal or non-federal research funding, regulatory or other agencies. Nominees may be active or retired but ordinarily will have a minimum of 10 years of such service. The individual's personal scholarly achievements (i.e., research, teaching, and writing) are not considered in the selection process independent of their service contributions.

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, program development activities). The nomination letters should be no more than two pages long.
- A curriculum vita
- Three letters of support from scientists, at least two from outside the nominee's organization

Deadline for submitting nominations is **March 1, 2005**. Please send nominations to Suzanne Wandersman via email (swandersman@apa.org). For a list of past recipients, visit: <http://www.apa.org/science/meritorious.html>.

Call for Nominations: Master Lecturers and Distinguished Scientist Lecturers

The American Psychological Association's (APA) Board of Scientific Affairs (BSA) is soliciting nominations for speakers for the 2006 Master Lecture Program and the 2006 Distinguished Scientist Lecture Program. These annual programs spotlight experts in psychological science and are sponsored by the APA's Science Directorate.

Selected speakers receive an honorarium of \$1,000 and reimbursement for travel expenses, up to \$1,000. All nominees should be excellent public speakers. BSA will review all nominations at its 2005 spring meeting and begin to contact potential speakers for these programs. Nominations may be for either the Distinguished Lecture or the Master Lecture program (or both).

The Master Lecture Program, developed by BSA, supports up to five (5) psychological scientists to speak at the APA Annual Convention. A list of previously selected speakers can be found on-line at <http://www.apa.org/science/masterlecturers.html>. BSA has organized the lectures into ten core areas to reflect the broad range of topic areas across psychology. Each year, five of these areas are addressed by Master Lecturers. Speakers for the 2006 Convention, to be held in New Orleans, LA, August 10-13, 2006, will give lectures in each of the following areas:

- developmental psychology
- learning, behavior and action
- methodology
- psychopathology
- social and cultural psychology

The Distinguished Scientist Lecture Program, developed by BSA, supports up to three (3) psychological scientists to speak at Regional Psychological Association meetings to be held in 2006. Speakers must be actively engaged in research, with expertise in any area and must be excellent speakers. A list of previously selected speakers and their topics can be found on-line at <http://www.apa.org/science/distsci-lecturer.html>.

Please send in the name of your nominee(s) via email (jkelleher@apa.org) or fax (202-336-5953) to Jeanie Kelleher, APA Science Directorate, 750 First Street, N.E., Washington, DC. 20002-4242. Nominations must be received by **February 11, 2005**.

Apply for the Positive Psychology Summer Institute

The Positive Psychology Summer Institute is now accepting applications for their five day conference in Philadelphia, Pennsylvania on June 24-29, 2005. Applicants should be in the early stages of a research career. Applications from non-psychologists are also welcome. For further details, please go to: www.positivepsychology.org/ppsi2005.htm.

Funding Available to Study LGB Family Psychology

Proposals Sought for LGB Research The American Psychological Foundation (APF) requests proposals for the 2005 Wayne F. Placek Research Large Research Grants and Small Research Grants. Both large and small grants support scientific research that increases the general public's understanding of homosexuality and aims to alleviate the stress that gay men and lesbians experience in this and future generations. Proposals are especially encouraged for empirical studies that address the following topics:

- Prejudice, discrimination, and violence based on sexual orientation
- Family and workplace issues relevant to lesbians and gay men
- Subgroups of the lesbian and gay population that have historically been underrepresented in scientific research, especially racial and ethnic minorities

Applicants for both awards must have a doctoral-level degree (e.g., PhD, PsyD, MD) and must be affiliated with a college, university, or research institution that meets federal requirements for administering research awards. Funds are not available for dissertation research or other pre-doctoral studies.

Wayne F. Placek Large Research Grants

The Wayne F. Placek Large Research Grants are available for empirical research on any topics related to lesbian, gay, or bisexual issues from all fields of the behavioral and social sciences. Applications should propose new studies that can be completed in two years solely with the level of funding provided by the grant.

Up to \$40,000 may be requested for any expenses legitimately associated with conducting an empirical research project, including salary for the applicant or assistants, equipment (with a \$5,000 limit), supplies, travel, photocopying, postage, and payment of participants. The award does not pay institutional indirect costs. Special preference for one of the two grants to be awarded will be given to applicants who have completed their doctorates within the previous seven years.

The deadline for receipt of applications is **March 11, 2005**. Award recipients will be announced in August, and funding will begin on or after September 15, 2005.

Wayne F. Placek Small Grants

The Wayne F. Placek Small Grants program covers expenses legitimately associated with conducting an empirical research project on lesbian, gay, and bisexual issues.

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The small grants award up to \$5,000. Applications should propose a new study that can be completed in one year solely with the level of funding provided by the grant. Funds are not normally provided for stipends of principal investigators, travel to conventions, or manuscript preparation. The award does not pay institutional indirect costs.

All application materials for small grants must be received by **January 26, 2005**. Awards will be announced in April 2005. Applications for both awards must conform to the APF Placek Grant Award guidelines. Application guidelines and forms may be downloaded from the Hooker Programs website: www.HookerPrograms.org.

Apply for Gerson Grant for Family, Couple, Multi-Generational Processes

The American Psychological Foundation (APF) announces the Randy Gerson Memorial Grant to be given in 2005. For the 2005 cycle of the grant, graduate students engaged in doctoral studies are invited to apply. The \$5,000 grant has been created to advance the systemic understanding of family and/or couple dynamics and/or multi-generational processes. Work that advances theory, assessment, or clinical practice in these areas shall be considered eligible for grants through the fund.

Preference will be given to projects using or contributing to the development of Bowen family systems. Priority also will be given to those projects that serve to advance Dr. Gerson's work.

Eligibility Requirements

Applicants from a variety of educational settings are encouraged to apply. Awards are given to students and professionals in alternate years. The 2005 grant will go to a graduate student engaged in doctoral studies.

Procedure

Submit the entire application electronically to APF via email (foundation@apa.org) by **February 1, 2005**. Applicants will be notified on or after April 15, 2005. Applications must include the following:

- Statement of the proposed project
- Rationale for how the project meets the goals of the fund
- Budget for the project
- Statement about how the results of the project will be disseminated (published paper, report, monograph, etc.)
- Personal reference material (vita and two letters of recommendation)
- Official transcript

For additional information, visit the APF website at www.apa.org/apf, or contact the APF Awards Coordinator/Gerson, 750 First Street, NE, Washington, DC 20002-4242, by telephone: (202) 336-5843 or via email: foundation@apa.org.

The APF encourages applications from individuals that represent diversity in race, ethnicity, gender, age, and sexual orientation.

Promoting Psychological Research and Training on Health Disparities Issues at Ethnic Minority Serving Institutions (PRoDIGS): Request for Proposals (RFP).

A small grants program funded by the American Psychological Association (APA) Science Directorate's "Academic Enhancement Initiative" and administered by the APA Public Interest Directorate's Office of Ethnic Minority Affairs (OEMA) in collaboration with the APA Minority Fellowship Program

PRoDIGS grants will be awarded to early career faculty for specific, limited, and highly focused activities that are both preliminary and related to the preparation of a federal or foundation funding proposal, and able to be fully implemented during a 12 to 18 month period. The proposed project seeks to increase the capacity of ethnic minority serving post secondary institutions and faculty to engage in health disparities research and to encourage student involvement in health disparities research training at early levels of the educational pipeline. Small grants (\$5,000 to \$6,500) will be awarded to support activities associated with the preparation of an initial research or program/curriculum development application for federal or foundation funding. All program/curriculum development application efforts must incorporate provisions for student research training, and whenever possible, research training applications should include student researchers. All applicants are required to submit a detailed concept paper (2 to 4 pages) of their proposed research or program/curriculum development effort.

Awardees may use their small grants for: course reduction to free up time for grant preparation; conduct of pilot study; consultation with research/curriculum experts; survey/instrument design; data collection; student assistance; faculty mini retreats/workshops, etc. All awardees will be expected to attend a mandatory 5 to 7 day professional development institute in Washington, D.C. during the summer of 2005 at which concept papers will be critiqued, major trends in health disparities research will be discussed, and opportunities to network with federal funding program directors and federal research institute staff will be provided. It is expected that awardees will submit a funding application to a federal agency or private foundation within 24 months after award of the small grant.

Deadline for Applications is **February 21, 2005**.

Application information and the complete RFP can be found at: <http://www.apa.org/pi/oema/prodigproposal.pdf>. Questions should be directed to Sonja Preston of the APA Office of Ethnic Minority Affairs (OEMA) at 202-336-6029.

NIH Updates Grant Review Criteria—Changes Take Effect in Summer '05

In mid-October, the NIH announced updated review criteria for evaluating NIH research grant applications. The criteria established in 1997 have been updated to better accommodate clinical, translational, and interdisciplinary studies. The updated criteria will be effective for all investigator initiated research grant applications submitted for receipt dates on or after January 10, 2005 [including those responding to a Program Announcement (PA)]. The NIH Review criteria can be accessed at: <http://grants.nih.gov/grants/guide/notice-files/NOT-OD-05-002.html>. Beginning with reviews in the summer of 2005, reviewers will be instructed to use the updated review criteria as the basis for evaluating research grant applications and for assigning a single, global score for each scored application. The score should reflect the overall impact that the project could have on the advancement of science. The emphasis on each criterion may vary from one application to another; and an application need not be strong in all categories to be judged likely to have a major scientific impact.

For a comparison of the revised and former review criteria, see: http://grants1.nih.gov/grants/peer/comparison_evaluation.doc. ■

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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.

To obtain a subscription to *Psychological Science Agenda*, contact the Science Directorate at: American Psychological Association, Science Directorate, 750 First Street, NE, Washington, DC 20002-4242.

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