

# PSYCHOLOGICAL SCIENCE AGENDA

SCIENCE DIRECTORATE of the AMERICAN PSYCHOLOGICAL ASSOCIATION

SPRING 2003  
VOLUME 16 NUMBER 2

2000-2010  
DECADE  
of BEHAVIOR



Executive Director's Column: Waiting For Science	3
Psychological Science Agenda Goes Electronic	4
An Interview with Norman Anderson	5
Science Briefs: Relations Between Long-Term and Short-Term Cognitive Development	8
Science Publishers Make a Difference	11
Master Lecturers Named for 2003 Convention	12
An Interesting Career: Cynthia Null Discusses Research and NASA	17

## NIH Director Discusses Health-Driven Initiatives with APA Leaders

by Patricia C. Kobar, Public Policy Office

Elias Zerhouni has been director of the National Institutes of Health for about six months, but has already met twice with the APA leadership. The first meeting was in a coalition of behavioral and social science organizations at the end of October. In January he met for a wide-ranging discussion with APA's new CEO, Norman Anderson, and senior staff from the Science Directorate and Public Policy Office.

Anderson embraced the opportunity to explain APA's programs and priorities to the director of NIH. He particularly emphasized his goal to make psychology more useful in the 'real world.' Zerhouni asked questions about the training, income and debt burden of scientific and practicing psychologists, remarking that psychologists seem to experience the same pressures as other NIH constituent scientists in deciding whether to specialize in research or practice.

Dr. Zerhouni encouraged APA to step into the forefront of efforts to improve U.S. health. He cited the growing rates of obesity in the U.S. in all age ranges, and mentioned how a concerted effort by psychologists to help people change behavior could be helpful. He also spoke about the problem of medical error, and mentioned that he feels behavioral research is the key to minimizing errors by health care providers.

"It's clear Dr. Zerhouni brings strong management and scientific skills to

NIH," said Norman Anderson. "He is focused on moving NIH forward in



Left to right: Raynard Kington, Kurt Salzinger, Elias Zerhouni, Norman Anderson, Merry Bullock, and Patricia Kobar.

areas that depend on behavioral research—elimination of minority health disparities, for example, and healthy behavior change."

"Dr. Zerhouni's focus on health-oriented results includes a strong emphasis on basic research," said Kurt Salzinger, Executive Director for Science. "He refers to the spectrum as 'original research' and 'derivative research,' and doesn't attempt to emphasize one end of the spectrum over the other."

Raynard Kington, the director of the NIH Office of Behavioral and Social Sciences Research, and Ruth Kirschstein, Senior Adviser to the NIH Director, attended the meeting. Shortly afterward, Dr. Zerhouni announced that Dr. Kington would replace Dr. Kirschstein, after her move to Senior Adviser, as Deputy Director of NIH. ■

# APA Files Amicus Curiae in Support of University of Michigan Admissions Process

by Keren Yairi, Special Projects Associate

2

APA has filed an amicus brief in support of the University of Michigan's affirmative action admissions policies that are currently under review by the Supreme Court. Two class-action lawsuits have been filed against the University by unsuccessful applicants to the institution who argue that admissions decisions considering race and ethnicity are unconstitutional.

The APA brief offers a number of psychological research findings supporting the University's position. The brief presents research demonstrating not only that racial and ethnic discrimination and prejudice persist in American society, but also that many people who do not believe themselves to be biased or racist actually do maintain racial and ethnic stereotypes.

Because such biases are usually automatic and unconscious, they cannot be eliminated merely through mindful efforts to change attitudes. However, stereotypes *can* be conquered over time, according to additional research cited in the brief, when opportunities are provided for students of different races or ethnic groups to interact with and learn from one another.

Why is it important for the psychological science community to address the Court on the subject of affirmative action? According to Mahzarin Banaji of Harvard University, who assisted in preparation of the document, "APA's brief does not contain mere aspirations about the assumed benefits of diversity and its role in reducing bias. It provides hard evidence about the depth of prejudice and its consequences, both conscious and unconscious. Nobody who has the capacity to understand the evidence, irrespective of their political leanings, can walk away without admiration and

full support for the University of Michigan's position."

Furthermore, explains Paul Sackett of the University of Minnesota, who also assisted in preparing the brief, "...Opponents of the University of Michigan's admission practices had presented arguments to the Court that seriously misconstrued psychological research showing links between campus diversity and important educational outcomes. I believe it is crucial that psychological science respond to these critics."

Sackett was referring to criticisms of the methodology used in the "Gurin Report," a research document assembled by University of Michigan psychology professor Patricia Gurin that was used by the lower courts in making an initial decision. The APA brief defends the scientific research standards of the Gurin Report and further demonstrates how the critiques themselves depend on numerous flawed assumptions and methods.

Finally, the brief supports the conclusion of lower courts that government has a "compelling interest" in diversity in higher education as a means of fostering positive interracial and inter-ethnic relations. As stated in the Gurin report, students who go to college in a diverse environment "are better prepared to become active participants in our pluralistic democratic society once they leave such a setting."

Psychology itself also has a "compelling interest" in creating a more diverse student body in higher education, as this will allow for more cultural diversity within the field that will ultimately yield a better understanding of the country's ethnically and racially varied population. "Diversity is an effective tool for creating cross-fertilization of ideas and contributions in institutions of

higher learning," according to Robert Sternberg, President of the APA and the Director of the PACE Center at Yale University. "There are multiple means of creating diversity. Affirmative action is one such legitimate means." ■

For more information on Affirmative Action and other related issues, please visit:

APA Resolution on Affirmative Action and Equal Opportunity (1999)  
[www.apa.org/pi/oema/oemares.html#affirmativeact](http://www.apa.org/pi/oema/oemares.html#affirmativeact).

APA Resolution on Ethnic Minority Recruitment and Retention (1994)  
[www.apa.org/pi/oema/oemares.html](http://www.apa.org/pi/oema/oemares.html).

## Research Funding Bulletin

**The APA Science Directorate has reinstated its Research Psychology Funding Bulletin!**

**It is now available on the APA web site:**

[www.apa.org/science/researchfunding.html](http://www.apa.org/science/researchfunding.html).

**The bulletin, which is updated monthly, lists special opportunities for individuals and agencies seeking research funding. To post an announcement to the bulletin, please send specific information to [science@apa.org](mailto:science@apa.org).**

## EXECUTIVE DIRECTOR'S COLUMN

KURT SALZINGER, Executive Director for Science

### Waiting for Science

It was the typical kind of conversation. She had just asked me what I did for a living and I explained I was a psychologist. The next question was entirely predictable. She sought my advice on a psychological problem. This time however, before I could begin to answer, my six-year-old daughter chimed in and clarified the situation:

"Daddy doesn't help anyone. He's not that kind of psychologist," she said.

I recalled that incident because I was recently trying to explain just what it is that a scientist psychologist does if he or she "does not help anyone."

The basic problem has not changed. The public assumes that psychologists read minds and analyze (see two successful movies using that word in their titles: *Analyze This* and *Analyze That*) people to lift depressions and dampen mania. To some degree I, of course, agree with my six-year-old daughter, perhaps more so when I was still a graduate student but to some degree still. I recall debating Otto Klineberg about how to save the world. The conversation naturally made its way to how psychology can best solve the world's problems. With the certainty that only a graduate student can marshal, I tried to explain how badly we needed basic research to help the world. "We need to find out the basics — we're not ready to apply what we know," I said authoritatively. Besides, I thought the fun part of science is to follow your ideas about how behavior works, no matter how crazy they might sound at first. Indeed, I thought, to make a discovery that is entirely unexpected is



much more interesting than plodding along in a persistent way doing "normal science" or methodically applying idea after idea to answer a particular practical question. What I wanted was the "Eureka experience," an insight that would suddenly but decidedly open up doors to new ways of conceptualizing behavior.

The irony of it is that in my present position I spend a large part of my day trying to convince government agencies that psychology can solve all those intractable problems facing us. After September 11th, I tried very hard to get my basic research colleagues to offer up their services to the government because psychology had the answers. Well, I got my comeuppance. The first group that I asked averred as how they were basic scientists and did not know enough about application to be helpful. Since then, of course, I have found quite a number of psychologists who have offered to help various government agencies with their knowledge. I've written on all of this before but I write about it again because I continue to find instances of policy and practices, which I know could be vastly improved by psychology's knowledge of behavior. In the Science Directorate, we have been helping to collect such information for

Phil Zimbardo's "Psychology makes a difference." You can see some examples of this in the booklet "Behavior Matters," available on the Decade of Behavior web site — [www.decadeofbehavior.org](http://www.decadeofbehavior.org) — instances in which our scientific research reduced car accidents (the high brake light, yellow-green fire engines), or increased the life and condition of premature babies through touch. We have also fostered the use of psychological principles in counter terrorism efforts, by meeting with staff of security agencies to recommend psychological science experts and to help them consider behavioral principles that could be employed in their encounters with terrorists.

But what about my idea of having fun while doing science? My dilemma is best stated by F. Scott Fitzgerald "... the test of a first-rate intelligence is the ability to hold two opposed ideas in the mind at the same time, and still retain the ability to function." We must view what we do in science as consisting of two important approaches — to explore those crazy ideas where they might lead — in basic and applied research, and to replicate, follow up and extrapolate in a methodical and systematic way. So what is the moral of my story? Search our web site [www.apa.org/science](http://www.apa.org/science) for our ideas and our offers of help. You will find FundSource to give you pointers to foundations and government agencies that provide support for research. You can write op-ed pieces to explain to lay audiences how the principles of psychology can help to improve society's lot. Finally, come join our One Book, One Psychology listserv and express your opinion of how we should approach psychology in a more unified way. Find it all on our website site: [www.apa.org/science](http://www.apa.org/science). ■

3

Visit our Op-Ed Page at  
[www.apa.org/science/editorial.html](http://www.apa.org/science/editorial.html)

## APA Presents Testimony at Institute of Medicine Meeting on NIH Center Grants

APA was the only behavioral science organization scheduled to testify at a February 7, 2003 meeting of the Institute of Medicine's Board of Health Sciences Policy subcommittee, examining NIH center grants. The purpose of the meeting was to examine the value of center grants in comparison with other grant mechanisms, especially the investigator-initiated (R01) grant.

4

Merry Bullock, Associate Executive Director for Science, gave the testimony on behalf of APA. The APA statement was written with input from the Board of Scientific Affairs, its Committee on Scientific Awards, and the executive committees of several divisions.

In response to the APA request for comments, scientists expressed disparate views about the value of center grants. Some commented that center grants waste scarce resources by protecting mediocre science under the umbrella of the best science in a center. Others pointed out that the administrative core funding in centers provides an important environment for multidisciplinary research efforts, which are particularly

needed in investigations of complex phenomena such as gene-environment interactions or health-related behavior change.

"The hallmark of NIH-funded research is excellence, and ... NIH needs multiple ways to foster excellence. Sometimes science is best served when its caretakers merely recognize excellence in a grant proposal and let it flourish unencumbered. Sometimes a measure of uncoordination, whether directed by NIH, scientists in the field, or even Congress, sparks new conversations and connections between scientists and adds value and company to a lone good idea," Bullock said.

APA's statement contained several recommendations for strengthening the center grant mechanism. First, NIH needs to collect more data about centers. It was not possible to pull data to show how many people had been trained through center grants vs. other grant mechanisms, for example. Second, leadership is a critical component in the success or failure of a center, and NIH needs additional ways to build leadership skills in its grantees and to

review for leadership skills in the peer review process.

Third, NIH needs greater flexibility to manage center grants, including funds to conduct site visits. Site visits were more common ten years ago than today. APA also recommended that NIH explore the concept of a new grant type--the R01. Plus, that would help bridge the large gap between investigator-initiated grants and center grants by providing some administrative or core support funding to an R01 grant.

APA member Jacqueline Dunbar-Jacob, Dean of the School of Nursing at the University of Pittsburgh and herself a center director, testified on behalf of the National Institute of Nursing Research (NINR). Dr. Dunbar-Jacob is a member of the NINR Advisory Council. She pointed out ways that NINR has used relatively small center grants to help train nurse researchers to work in multidisciplinary environments.

The Institute of Medicine subcommittee on centers will issue its report in 2004. More information is available at [www.iom.edu/centers](http://www.iom.edu/centers). ■

## Psychological Science Agenda Goes Electronic

The *Psychological Science Agenda* is now a seasonal publication, which focuses on covering stories related to the scientific psychology arena. In the coming months, our newsletter will transfer to an electronic format and readers will no longer receive a printed version in the mail. Instead, the same information will be available online, which can be read by logging onto our website.

Our new format will include more updated articles related to the behavioral research community, national scientific

policy, and news that keeps members of the scientific and academic community



informed of future funding and upcoming, featured programs. Soon, our publication will be accessed through the APA Science Directorate website, where

readers can immediately read the most updated pieces, with opportunities for your feedback and commentary on past articles. The *Psychological Science Agenda* will also be available in a PDF form, for those who prefer to print and read their articles in a hard copy format.

Let the editor know your thoughts and suggestions regarding our newest endeavor, by e-mailing Amena Hassan at [ahassan@apa.org](mailto:ahassan@apa.org). Please include what you would like to see in upcoming issues and how we can improve our publication to better serve the academic, research, and scientific community. ■

# An Interview with Norman Anderson, CEO of APA

by Jonathan Tin

**N**orman Anderson officially began his term as Chief Executive Officer of APA on January 1, 2003. After holding academic positions at Duke University and Harvard’s School of Public Health, and serving as the first director of the Office of Behavioral and Social Science Research (OBSSR) at the National Institutes of Health, Dr. Anderson takes the reins at APA.



NORMAN ANDERSON

## Do you have any special plans for scientists? What will you do to attract more scientists to return to, and remain in, APA?

The two questions are related. We have to show scientists that APA is working aggressively on their behalf. As I’ve said before, Science is one of the best-kept secrets APA has. We have a large number of programs that communicate the science of psychology, and advocate for funding both on Capitol Hill and with funding agencies like NSF and NIH.

One of the things that I have talked to Kurt [Salzinger, Executive Director for Science] about is doing an even better job of communicating to the scientific community about the things that APA does. We have to continue to develop ways of letting scientists *know* what we are doing. I think when scientists realize how much we do – and the fact that we’re trying to do so much more – it will have the effect of attracting people back to the organization.

## What could scientists do to further the cause of psychological science?

It’s an interesting paradox that, on one hand, we’d like scientists to be more involved in advocating – communicating to the general public about what they do and why it’s important. The more educated the public is, the better it is for psychological science. This means psychologists working in their local communities, and also working on state

and national levels to make sure that policy makers are informed.

On the other hand, we have to appreciate that scientists are not necessarily rewarded for doing these sorts of activities. Scientists are rewarded for what they do best, and that is science. So while we would like to be able to call upon scientists to be proactive in their communities, the best thing they can do is continue to do the very best science. But we also need a subset of people who are interested in taking that science forward, to not only advocate for psychological science, but to actually create tools based on the science to improve the quality of people’s lives. That’s ultimately what we’re all about. But sound psychological science is the first step.

I would encourage those scientists who have an interest in public policy, and those who have an interest in “translational” work – taking science from the bench, as it were, to the public – to think about pursuing that interest more purposefully. We need people who are scientifically sophisticated carrying this message forward. But it’s not for everybody. Those who are not interested in it should not feel as though they’re not carrying the flag. If they continue to do the very best science, that’s as much as we can ask.

## How did your time at OBSSR help prepare you for the CEO position?

In several ways, OBSSR was the first time I held a national leadership position. I had been involved in leadership activities as a professor at Duke, but this was the first time my job involved significant administrative work, significant national visibility, and significant work inside the federal government. So it really allowed me to explore some other professional interests I had, but also it taught me about advocacy, and about working in large, complex and politically sensitive organizations. There are a lot of similarities between my work at NIH and at APA, and a lot of things I learned at NIH that helped prepare me for this job.

The difference, obviously, is that OBSSR was created from scratch, so the challenge was to make something useful out of it. Here that’s obviously not a challenge. This organization’s been around a long time, and my job is to take a great organization and try to make it even better. Some of the same principles still apply – the need to create a vision, and to have a strong team working with you. Fortunately one of the legacies of Ray Fowler is to have left a very strong management team, so that’s one thing I don’t have to worry about at APA. ■

**Tie a String Around Your Finger...**

The 2003 APA Convention will be in Toronto, August 7-10.

The weather will be perfect and the science programming exceptional – mark your calendar now.

Visit [www.apa.org/convention](http://www.apa.org/convention) for information about 2003 and future conventions.

## Chesney Appointed Deputy Director of Complementary and Alternative Medicine Center at NIH

by Patricia C. Kobar, Public Policy Office

**P** sychologist Margaret A. Chesney was appointed in January to the new position of Deputy Director of the National Center for Complementary and Alternative Medicine (NCCAM) at the National Institutes of Health. Established in 1998, NCCAM is 1 of 27 Institutes and Centers that comprise NIH. NCCAM is the lead federal agency in supporting scientific research on complementary and alternative medical (CAM) healing practices, educating and training CAM researchers, and disseminating research findings to the public and health professionals.

As NCCAM's first Deputy Director, Dr. Chesney will help formulate, guide, and oversee the management of all NCCAM-funded extramural centers, investigator-initiated research, research contracts, fellowships, and training and career awards—totaling over \$86 million in investments in Fiscal Year 2002.

Prior to joining NCCAM, Dr. Chesney was professor of medicine and epidemiology at the School of Medicine, University of California, San Francisco (UCSF), where she was co-director of the Center for AIDS Prevention Studies and director of the behavioral medicine and epidemiology core of the UCSF Center for AIDS Research. Most recently, she was also a senior visiting scientist in the NIH Office of Women's Health, in the Office of the Director.

Throughout her career, Dr. Chesney has designed and conducted original research on the relationship between behavior and chronic illness, and on behavioral factors in clinical trials, including issues of recruitment, adherence, and retention. She also worked on the development and evaluation of psychosocial and behavioral interventions for health promotion, illness prevention, and treatment.

"Margaret Chesney is a leader and a creative thinker in health psychology. Psychology is fortunate to have her in a leadership position at NIH, and NIH is lucky to have her," said Kurt Salzinger, Executive Director for Science.

Dr. Chesney is a past president of APA's Division of Health Psychology. A recipient of many awards and honors, she received the annual award for Outstanding Contributions to the APA's Division of Health Psychology in 1982 and in 1986; the President's Award from the Academy of Behavioral Medicine Research in 1987; and the Charles C. Shepard Science Award from the Centers for Disease Control and Prevention in 1999. In 2000, she was a senior fellow at the Center for the Advancement of Health in Washington, DC, and in 2001 she was elected to the Institute of Medicine of the National Academies of Science. ■

## Philip Zimbardo Recognized for Bridging the Gap Between Psychology and the Public

**T** he 2002 Sagan Award, one of the more prestigious awards named after the late scientist Carl Sagan, was presented to APA Past-president Philip G. Zimbardo by the Council of Scientific Society Presidents during its semiannual meeting in Washington D.C.

A steady advocate of bringing psychology to the forefront of the public eye, Zimbardo was recognized by the organization for his video series *Discovering Psychology* produced by WGBH in Boston. The series, which focuses on subjects such as cognitive neuroscience, covers the fundamental principles and major concepts of psychology including: brain and behavior, sensation and perception, conditioning and teaming, cognitive



Philip Zimbardo after receiving his award with Ed Wasserman, CSSP Chair.

processes, motivation and emotion, life-span development, the self and identity, sex and gender, testing and intelligence, social influences, psychopathology and therapy, stress and health issues, methodology, and new directions.

*Discovering Psychology* has provided numerous high school and college students with introductory psychology credit and also won an Emmy Award from the National Academy of Television Arts and Sciences. Also included is classic experiment footage, interviews with leading psychologists, and coverage of emerging research.

Earlier winners of the Sagan Award include William Allen, editor of *National Geographic Magazine*, Bill Nye for Children's Educational TV, Edward O. Wilson, curator at Harvard's Museum of Comparative Zoology, and Paula Apsell of Nova-TV. For additional information on Philip Zimbardo's research, visit his website at [www.zimbardo.com](http://www.zimbardo.com) or see the February article in APA's *Monitor on Psychology*. ■

## Peter Salovey named Dean of the Graduate School at Yale

Yale University President Richard C. Levin recently named Psychology Professor Peter Salovey as the next dean of the Graduate School of Arts and Sciences.

Salovey, the Chris Argyris Professor of Psychology and chair of the Psychology Department for the past two and one-half years, joined the Yale faculty in 1986 and became a full professor in 1995. Before becoming chair of his department, he served as director of graduate studies in Psychology for six years. He holds secondary appointments in the Department of Epidemiology and Public Health and the Institution for Social and Policy Studies. In addition, he is deputy director of the Center for Interdisciplinary Research on AIDS. ■

## Eleanor Gibson dies at 92

Eleanor Gibson, 1968 recipient of the APA Distinguished Scientific Contribution Award, died on December 29, 2002. Born in Peoria, Illinois in 1910, Gibson received her PhD from Yale University in 1938 and spent the majority of her career at Cornell, where she was the first woman to occupy an endowed chair. She is one of eight psychologists to have won the National Medal of Science, hers in 1992.

A leader in research on human infancy, with an area of expertise in perceptual development, language development, and reading, her most well known contribution is probably the visual cliff – the glass covered precipice over which more than ninety percent of infants feared to tread. The findings indicated most obviously that infants could perceive the depth, but more importantly that perception is an essentially adaptive process. “We

perceive to learn, as well as learn to perceive,” said Gibson.

Earning many honorary degrees, she also served as President of the Eastern Psychological Association and was a fellow of the American Academy of Arts and Sciences and the National Academy of Sciences. Her husband, fellow psychologist, and occasional collaborator James Gibson, died in 1979.

She is survived by son Jerry, of Columbia, South Carolina, a state epidemiologist and chief of the Bureau of Disease Control for the Department of Health and Environmental Control; a daughter, Jean Rosenberg of Middlebury, VT; and three grandchildren. ■

7

## National Academy Grants 2003 Troland Awards

Established by Leonard T. Troland for ongoing research by young investigators through the National Academy of Sciences, the 2003 Troland Research Awards were granted to David C. Plaut of the Center for the Neural Basis of Cognition at Carnegie Mellon University and Michael J. Tarr, Professor of Visual, Cognitive and Linguistic Sciences at Brown University.

The focus of the award is to recognize rare achievements by researchers, under the age of 40, during their ongoing empirical investigation in psychology, particularly in regards to the connection between the physical world and consciousness.

“I am, of course, extremely pleased and honored to be receiving the Troland Research Award from the National Academy of Sciences,” stated Plaut who received the award for his computational analyses of reading, language, and areas of cognition, which clarified the

consequences of brain injury. “I appreciate the strong support that it represents for the importance of computational modeling in understanding cognitive processes and their neural implementation.”



DAVID C. PLAUT

Tarr, who was recognized for his ongoing investigations of object recognition and for demonstrating the importance of expertise in organizing brain areas for faces and other objects, also expressed what it meant to receive the award for 2003. “I was very



MICHAEL J. TARR

honored and doubly so, given past recipients,” he stated. “My immediate thought was that this would not have been possible without all of the wonderful collaborators and students I have had over the years.”

For more information about this year’s recipients and past recipients of the Troland Award, visit the National Academies website at [www.nationalacademies.org](http://www.nationalacademies.org). ■

## SCIENCE BRIEFS

## Relations Between Short-Term and Long-Term Cognitive Development

by Robert S. Siegler

**T**he relation between short-term and long-term changes in children's thinking is among the enduring issues in developmental psychology. It is also among the issues on which classic developmental theories differ most dramatically. Werner (1948) and Vygotsky (1962) viewed short-term change as an accelerated version of long-term change, with similar underlying processes and similar sequences of qualitatively-distinct stages of understanding. Learning theorists such as Kendler and Kendler (1962) also viewed short-term and long-term change as fundamentally similar, but unlike Werner and Vygotsky, they believed that both are gradual incremental processes, with no qualitatively distinct stages. Piaget (e.g., 1970) took a third position; he viewed the two types of change, which he referred to as learning and development, as fundamentally dissimilar; development created new cognitive structures, whereas learning merely inserted specific content.

The relation of short-term to long-term change continues to be a central issue within contemporary developmental theories, including dynamic systems, neo-Piagetian, and information processing approaches. However, a lack of methods, and therefore a lack of empirical data, for directly comparing changes on the two time scales has made it difficult to evaluate the alternative theoretical stances.

Recently, Siegler and Svetina (2002) proposed a variant of the microgenetic method that yields data directly relevant to this fundamental issue. Microgenetic methods are defined by three primary qualities:

1) Observations span a period of rapidly changing competence.



ROBERT SIEGLER

Robert Siegler is Teresa Heinz Professor of Cognitive Psychology at Carnegie Mellon University. He has been at Carnegie Mellon since receiving his PhD in 1974 from SUNY at Stony Brook. In the ensuing years, he has written 6 books, edited 3 others, and authored more than 150 articles and book chapters. The books and articles have focused on children's reasoning and problem solving, particularly in science and math. His latest book, written with Judy DeLoache and Nancy Eisenberg, is a child development textbook titled "How Children Develop" (Worth Publishers, 2003).

2) The density of observations within this period is high, relative to the rate of change.

3) Observations of changing performance are analyzed intensively, with the goal of inferring the processes that gave rise to them. The second characteristic is particularly important. Intensively examining performance while it is changing provides the high temporal resolution needed to describe the process of change. The trial-by-trial data obtained in many microgenetic studies also allow identification of

qualitatively distinct rules and strategies that generate the performance.

In addition, the detailed data about changing behavior yielded by microgenetic studies have proved useful for guiding theorizing about the mechanisms that produce observed changes. Many mechanisms could potentially produce changes of a general sort (e.g., moving from not understanding X at 5 years to understanding X at 7 years). However, far fewer mechanisms could give rise to the highly specific data about changes in strategy use, particular errors, solution times, and generalization rates that can emerge from microgenetic studies. For this reason, microgenetic data have proved useful for guiding construction of computer simulations of cognitive development (e.g., Jones, Ritter, & Wood, 2000; Shrager & Siegler, 1998).

It probably is not coincidental that microgenetic methods have antecedents in all of the classic theories cited above. The microgenetic approach originally proposed by Werner (1925), was subsequently advocated by Vygotsky (1962) and Piaget (1974), and has been used in numerous studies inspired by Skinnerian theory (e.g., Stokes & Harrison, 2001). All of the theorists viewed the approach as useful for inferring understanding of how change occurs.

The value of microgenetic data for guiding thinking about change mechanisms, together with the applicability of the approach to a wide range of age groups and content areas, have led to the approach becoming increasingly frequent. As noted in several recent reviews (Kuhn, 1995; Miller & Coyle, 1999; Siegler, 2000), there is widespread agreement that at a general level, the changes observed

within a session or over a few sessions in microgenetic studies resemble the longer-term changes observed in cross-sectional and longitudinal studies.

However, as the reviews also note, there is much less agreement as to the level of detail at which the resemblance holds, due to differences in the conditions under which the changes take place and the ways in which changing competence has been measured.

To obtain data directly relevant to this issue, Siegler and Svetina (2002) proposed the microgenetic/cross-sectional design. The goal of this design is to obtain maximally parallel data about short-term and long-term cognitive changes within a single study, using a constant experimental procedure, and then to draw detailed comparisons of the fine structure of the changes.

Siegler and Svetina's initial use of the approach focused on development of the ability to solve matrix completion problems. The problems that we presented involved 3X3 matrices, with eight of the nine cells containing entries that varied in systematic ways across the rows and columns (for example, large objects in the top row, medium size ones in the middle row, and small ones in the bottom row, and rabbits in the left column, mice in the middle column, and birds in the right column. The child's task on each problem was to select which of six alternatives belonged in the empty cell of the matrix.

The alternative answers varied along four dimensions: form, size, color, and orientation; on each problem, one alternative was correct, four differed from the correct choice along a single dimension (e.g., it was the wrong size but was otherwise correct), and one differed on all dimensions. Thus, four alternatives were correct on each dimension considered individually, but only one alternative was correct on all four dimensions.

The cross-sectional component of the study involved presenting matrix completion and conservation tasks without feedback to 6, 7, and 8-year-olds. To provide a point of comparison for the effects of the microgenetic manipulation, children in the cross-sectional comparison also were presented matrix completion and conservation problems three months after the pretest.

The microgenetic component of the study involved randomly selecting a subset of the 6-year-olds and presenting them the same initial session as in the cross-sectional group, four subsequent matrix completion learning sessions over the next month, and a post-test two months after the final learning session (three months after the initial session). In the learning sessions, the experimenter said after each incorrect answer "No, I would pick that one. Why do you think I would pick that one?" Asking children to explain another person's correct answers has been found to promote improved reasoning on a variety of problems (Siegler, 2000).

Crucial to the logic of the comparison of the two time scales of change was matching the global amount of change of children in the two groups. The global measure used in this study was overall percent correct. Children in the microgenetic condition improved their percent correct from 25% to 50%; therefore we identified an age range in the cross sectional sample in which matrix completion performance showed comparable improvement. This was the range from 6 to 7 years. Identifying groups for which the global amount of change was comparable allowed meaningful comparison of the fine structure of change.

To compare the patterns of short-term and long-term change, we examined whether there was significant pretest/post-test change on 11 measures. In all but one case, significant change occurred either in both the cross sectional and the microgenetic groups or in neither of

them. The match was often impressively specific. For example, both groups showed significant increases in percentage of choices in which orientation and size were correct, and neither group showed changes in the percentage of choices in which color and form were correct.

Similarly, both groups made the same predominant error (choosing a duplicate of an object in the matrix), and the error accounted for comparable percentages of errors in the two groups (57% and 59%). In addition, the learning of children in the microgenetic group showed impressive stability over time; percent correct was 49% in both the last session before the two-month hiatus and in the first session after it, and individual children's percent correlated  $r = .98$  at the two times.

Moreover, learning of matrix completion by children in the microgenetic condition generalized to conservation. Both stability over time and generalization to novel tasks were said by Piaget (e.g., 1970) to be characteristic of development but not of learning; by that standard, the change produced by the microgenetic manipulation represented development.

Another type of data that suggests that short-term and long-term change have a great deal in common involves developmental sequences. On tasks where long-term cognitive change involves a progression through a predictable sequence of qualitatively discrete knowledge states, microgenetic manipulations generally elicit the same progression. On balance scale problems, for example, children progress from relying on weight when the amounts of weight on the two sides are unequal, to relying on weight in all cases, to also considering distance when weights are equal.

When children do not receive instruction, this sequence occurs over a period of two or three years. When they

...continued on next page

...continued from previous page

do receive instruction, the same progression can occur in half hour microgenetic manipulations (Siegler & Chen, 1998). Identical sequences of knowledge states also characterize short-term and long-term change on tasks that measure infants' conceptual development (Oakes & Plumert, 2002), preschoolers' memory strategies (Miller & Aloise-Young, 1996), school age children's development of mathematical equality concepts (Goldin-Meadow, 2001), and many other tasks.

10

An encouraging implication of these findings is that if a change emerges in a microgenetic study, it is likely to find parallels in age-related change. In Siegler and Svetina (2002), on every measure that revealed microgenetic change, there was corresponding change with age. It thus seems reasonable to hypothesize that phenomena that have emerged consistently in microgenetic studies but that cannot easily be examined in standard cross-sectional or longitudinal studies, also characterize age-related change. These phenomena include high variability immediately prior to discoveries, short-lived transition strategies, and unconscious discovery of new strategies. Short-term and long-term behavioral changes clearly have a great deal in common. The same seems likely to be true of the processes that underlie the behavioral changes. To be specific, the processes that produce changes over days or weeks are likely to be involved in producing changes over years as well.

Siegler and Svetina's findings on the matrix completion task illustrate how the detailed descriptions of change yielded by microgenetic studies can help us understand change mechanisms. For example, the matrix completion findings indicated that rejecting existing approaches and generating superior new approaches are separate processes. Children shifted away from usually choosing a duplicate of one of the pictures in the matrix for roughly a dozen trials before they discovered the correct strategy. During those dozen trials, they chose in a seemingly haphazard way among the six response

alternatives. Then they discovered the correct approach and relied on it relatively consistently thereafter. Similar temporal separations between rejection of approaches that yield consistently wrong choices and discovery of superior alternatives have emerged in previous microgenetic studies of learning about balance scales, number conservation, and mathematical equivalence (Siegler, 2000).

A vital question raised by this analysis is "Are there cognitive processes unique to long-term change?" Findings to date do not answer this question. However, by documenting the extensive similarities between short and long-term changes, the findings raise the question in clear relief.

**References**

Goldin-Meadow, S. (2001). Giving the mind a hand: The role of gesture in cognitive change. In J. L. McClelland, & R. S. Siegler, (Eds.), *Mechanisms of cognitive development: Behavioral and neural perspectives* (pp. 5-31). Mahwah, NJ: Erlbaum.

Jones, G., Ritter, F. R., & Wood, D. J. (2000). Using a cognitive architecture to examine what develops. *Psychological Science, 11*, 93-100.

Kendler, H. H., & Kendler, T. S. (1962). Vertical and horizontal processes in problem solving. *Psychological Review, 69*, 1-16.

Kuhn, D. (1995). Microgenetic study of change: What has it told us? *Psychological Science, 6*, 133-139.

Miller, P. H., & Aloise-Young, P. (1996). Preschoolers' strategic behaviors and performance on a same-different task. *Journal of Experimental Psychology, 60*, 284-303.

Miller, P. H., & Coyle, T. R. (1999). Developmental change: Lessons from microgenesis. In E. K. Scholnick, K. Nelson, S. A. Gelman, & P. H. Miller (Eds.), *Conceptual development: Piaget's*

*legacy* (pp. 209-239). Mahwah, NJ: Erlbaum.

Oakes, L. M., & Plumert, J. M. (2002). Variability in thirteen-month-old infants' touching patterns in the sequential-touching task. *Infant Behavior and Development, 25*, 529-549.

Piaget J. (1974). Forward to *Learning and the development of cognition*, by Inhelder, B., Sinclair, H. & Bovet. M. (pp. ix-xiv). Cambridge, MA: Harvard University Press. (Translated from the French by S. Wedgwood.)

Piaget, J. (1970). *Psychology and epistemology*. New York: Viking Press.

Shrager, J. & Siegler, R. S. (1998). SCADS: A model of children's strategy choices and strategy discoveries. *Psychological Science, 9*, 405-410.

Siegler, R. S. (2000). The rebirth of children's learning. *Child Development, 71*, 26-35.

Siegler, R. S. & Chen, Z. (1998). Developmental differences in rule learning: A microgenetic analysis. *Cognitive Psychology, 36*, 273-310.

Siegler, R. S., & Svetina, M. (2002). A microgenetic/cross-sectional study of matrix completion: Comparing short-term and long-term change. *Child Development, 73*, 793-809.

Stokes, P., & Harrison, H. M. (2001). Constraints have different concurrent effects and aftereffects on variability. *Journal of Experimental Psychology: General, 131*, 552-566.

Vygotsky, L. S. (1962). *Thought and language*. New York: Wiley.

Werner, H. (1925). Uber mikromelodik und microharmonik [Musical micromelodies and microscales]. *Zschr. Psychol, 98*.

Werner, H. (1948). *Comparative psychology of mental development*. New York: International Universities Press. ■

## Science Publishers Make a Difference

by Mary Lynn Skutley, Assistant Director of APA Books

Asking the right research question, choosing the best method of study, and analyzing results with intelligence and integrity are key aspects of the scientific endeavor. But until results are shared widely with others, the process is incomplete. Past APA President Phil Zimbardo has urged psychologists to focus on how their work might be applied in the real world—to show how “psychology makes a significant difference.”

APA journals have long been viewed as the premier outlet for disseminating scientific knowledge and completing the research process. Less well-known is the role of the APA Books program in demonstrating how psychology makes a difference—both to other psychologists and to those in such fields as medicine, law, business, and education who are positioned to apply the lessons learned from sound psychological research.

### Getting the Word Out

APA Books is well positioned to reach those who may benefit from scientific research. We have the most extensive and effective marketing of any psychology publisher. Our in-house database contains the names and orientations of over 150,000 psychologists, and we are capable of reaching hundreds of thousands of readers outside of the psychology profession.

By sending direct mail flyers and catalogues to highly focused audiences, we are able to reach scholars in a variety of disciplines who are interested in the related applications described in such books as *Behavioral Genetics in the Postgenomic Era*, edited by Robert Plomin, John C. DeFries, Ian W. Craig, and Peter McGuffin; *Visual Perception: The Influence of H. W. Leibowitz*, edited by Jeffrey Andre, D. Alfred Owens, and Lewis O. Harvey, Jr.; and *Animal Research and Human Health: Advancing Human Welfare Through Behavioral*

*Science*, edited by Marilyn E. Carroll and J. Bruce Overmier.

New titles typically appear in multiple direct-mail promotions each season, reaching an average of approximately 500,000 buyers. In addition, APA marketing staff attend nearly 30 professional meetings and conferences each year, which afford the opportunity to “hand-sell” each book to professionals with a demonstrated interest in keeping abreast of current literature. And at an additional 40 or more professional conferences each year, APA Books are represented by independent exhibitors.

Virtually any day of the year, a review of an APA publication is in print somewhere in the world. Copies of recent titles are routinely mailed to core reviewers at prestigious journals and magazines. In addition, new titles are typically advertised in targeted professional journals in advertisements that may run over 50 times in as many as 50 different publications. APA Books are likewise promoted on the web, through our own secure web site and on-line store as well as through internet distributors like [www.amazon.com](http://www.amazon.com) and [www.barnesandnoble.com](http://www.barnesandnoble.com).

Distribution of APA Books is not limited, however, to scholars in the United States. International distributors have assured that our books are available in Europe, Africa, Asia, Australia, and throughout the Americas. Audiences in many countries have the added benefit of reading APA publications in their own languages. APA Books and videos have been translated into more than a dozen languages to further the cause of demonstrating how psychology can make a difference throughout the world.

### Creating Quality Books

Extensive and skilled marketing is worthless, however, without a commitment to quality. Just as APA Journals publish only articles that are

carefully vetted to meet the standards determined by peer review, APA Books is committed to the highest standards of editorial excellence.

With a stable staff of knowledgeable and enthusiastic in-house editors, APA Books offers those who publish with us constructive peer reviews as well as detailed conceptual feedback. Psychologists who choose to publish with APA Books can be assured of support that will help them identify the broadest audience for their work and write effectively to reach that audience. Our commitment to quality makes APA Books the best source for learning about science as it evolves.

We strive to provide readers with a balanced sense of scientific controversies, to identify emerging theoretical trends and explore their implications, to synthesize new research and show its significance for multiple audiences, and to stimulate curiosity by asking and exploring the perennial questions that drew us to the field to begin with. What are the properties that make us human? How can they be measured with accuracy and reliability? Can psychology relieve human suffering? What are the psychosocial bases of health? The curiosity that drives the scientific process relies upon observation, analysis, and publication to generate better questions and, ultimately, to yield a stronger knowledge base.

Psychology can make a difference only if research implications are made clear and disseminated widely. APA Books offers the professional publishing services that will ensure a long and productive life for your scientific research. If you would like to submit a proposal for consideration, please send it to APA Books, 750 First Street, NE, Washington, DC 20002. Proposal guidelines can be found at [www.apa.org/books/guidelines.html](http://www.apa.org/books/guidelines.html). ■

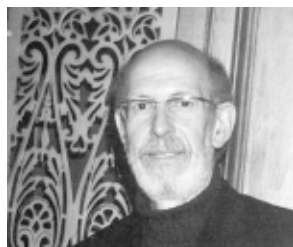
# Master Lecturers Named for 2003 Convention

by Keren Yairi, Special Projects Associate

12

The Board of Scientific Affairs has named five distinguished psychologists to be the 2003 Master Lecturers at the APA Annual Convention in Toronto. The Master Lectures Program spotlights experts in psychological science and is organized into ten core areas that reflect the field, five of which are addressed each year. The 2003 featured core areas include personality, cognition and perception, health and behavioral medicine, animal and human biopsychology, and applied psychology.

**William Cross** (personality), Professor of Psychology and Coordinator of the Doctoral Program in Social-Personality



Psychology at the Graduate Center for the City University of New York, will discuss

“Advances in the Psychological Discourse on Black Identity.” Dr. Cross is considered one of the leading experts on the study of African-American identity, and his text, *Shades of Black: Diversity in African-American Identity*, is considered a classic. More recently, he co-authored a groundbreaking work that traces the development of black identity from infancy across the life span. Dr. Cross is also a consultant to government, education, and industry on the business and educational implications of America’s changing demographics.

**John Jonides** (cognition and perception), Professor of Psychology and Neuroscience at the University of Michigan and co-Director of the Functional MRI Center at Michigan, will address “Modules of Working Memory in Mind and Brain.” Dr. Jonides’ research program has recently concentrated on understanding the storage and executive processes that are involved in working memory, a crucial memory system for normal cognitive

functioning. This research uses a combination of behavioral testing on normal and brain-injured adults as well as neuroimaging techniques (PET and fMRI) applied to adults engaged in working memory tasks. Dr. Jonides is currently Editor of *Cognitive, Affective, and Behavioral Neuroscience* and is a



Fellow of the American Association for the Advancement

of Science and the Society of Experimental Psychologists.

**Janice Kiecolt-Glaser** (health and behavioral medicine) is Professor of Psychiatry and Psychology in The Ohio State University College of Medicine, as well as Director of the Division of Health Psychology in the Department of Psychiatry. Her lecture will cover



“Love, Marriage and Stress Hormones: How Close Relationships Influence Health.” Her

work has demonstrated important health consequences of stress, including slower wound healing and impaired vaccine responses, and has also focused on the ways in which personal relationships influence immune and endocrine function and health. Most notable among Kiecolt-Glaser’s honors is her membership in the Institute of Medicine of the National Academy of Sciences; she is also the past President of the Division of Health Psychology and a Fellow of the American Association for the Advancement of Science and of APA.

**Mortimer Mishkin** (animal and human biopsychology), Chief of the Cognitive Neuroscience section in the Laboratory of Neuropsychology at the NIMH, will

present “The Joists and Tiers of Memory.” In his studies of brain/



behavior relations in humans and nonhuman primates, Dr. Mishkin has helped identify some of the areas in the cerebral cortex that are essential for

perception and memory. He and his colleagues have also found that cortical sensory streams stimulate two different brain circuits required for memory, one for the memory of facts and events and another for the learning of habits and motor skills. Dr. Mishkin is Past President of the Society for Neuroscience and of the APA Division of Physiological and Comparative Psychology and is a member of the National Academy of Sciences and the Institute of Medicine.

**Gary Wells** (applied psychology) is Professor of Psychology at Iowa State University and holds the title of Distinguished Professor. He will speak on “Improving Police Lineups: A Successful Application of Scientific Psychology.” Dr. Wells’ internationally known research findings on eyewitness



identification have been incorporated into standard textbooks in psychology and law. His studies, which demonstrate that rates of mistaken

eyewitness identification can be exacerbated by the methods that crime investigators use in conducting lineups and photo spreads, led to the development of the sequential lineup, which is regarded as a superior way to conduct lineups. Dr. Wells has received the Distinguished Contributions to Psychology and Law Award from the American Psychology-Law Society. ■

## Fiscal Year 2003 Appropriations Finally Passed

by Karen Studwell, Public Policy Office

**J**ust in time for President's Day weekend, Congress was able to pass an omnibus package of the remaining eleven spending bills that constitute \$397 billion in federal spending. Congressional leaders were prepared to pass a final continuing resolution that would have funded the federal government at FY 2002 levels for the rest of FY 2003, which would have been devastating to many research programs. While not meeting all the needs for scientific research, the bill includes sizeable increases for both the National Institutes of Health (NIH) and the National Science Foundation (NSF).

NSF received a substantial 11 percent increase of \$536 million over last year's level and \$316 million over the President's budget request, bringing FY03 funding to \$5.3 billion, the largest NSF budget ever. Funding includes: \$4 billion for research; \$150 million for research equipment and construction; and \$909 million for education and human resources.

The FY 2003 appropriation and the Administration's FY 2004 request for Science and Technology (the budget program that includes basic and applied research) at the Department of Defense

(DoD) are disappointing. The Coalition for National Security Research, of which APA is a member, and a number of legislators and defense experts support the DoD spending at least 3 percent of its overall budget on science and technology. This proportion is comparable to research spending in industry and deemed an appropriate investment in basic science. The Administration request for FY 2004 falls short of this goal.

NIH received \$27.3 billion, \$3.8 billion higher than FY02 funding, but several million less than the President's request. While appearing to meet the congressional goal of doubling the NIH budget, not all institutes will benefit equally. Almost half of the increase is marked for bioterrorism infrastructure and research that will be funded primarily by the National Institute of Allergy and Infectious Diseases (NIAID). The remainder will be split among the other institutes, resulting in moderate increases of approximately 9 percent for most institutes.

While claiming a victory for getting the FY03 budget through Congress, the scientific community is already ramping up advocacy efforts for FY04. The

President released his FY04 budget proposal on February 3<sup>rd</sup>, which requested a devastating 2 percent increase for NIH. The President's FY 2004 request for NSF is \$5.5 billion, substantially less than the \$6.4 billion level proposed in the NSF reauthorization bill signed into law in December. This amount is only a little more than 3 percent over the FY 2003 funding level of \$5.3 billion, which is an 11 percent increase over FY 2002.

APA and other organizations will be relying on its scientific members this year to help us make the case to congressional appropriators that research funding must be consistent to avoid damaging the workforce pipeline for researchers and slowing the progress that is being made on reducing public health burdens of disease. If you would like to assist APA in this effort, please subscribe to our science policy email newsletter so that we can keep you informed about our efforts and see what you can do to advocate for the importance of science funding. To learn more about the science policy office please visit our website at: [www.apa.org/ppo/issues/spinhome.html](http://www.apa.org/ppo/issues/spinhome.html). ■

13



### SPIN: 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. Visit [www.apa.org/ppo/issues/spinhome.html](http://www.apa.org/ppo/issues/spinhome.html) to read legislative news, subscribe to SPIN via the web, or to browse through past issues.**

## APA in Toronto: Fantastic Exchange Rate, Fantastic Science!

Don't miss the opportunity to take part in an APA Convention, jam-packed with exceptional talks from some of North America's most eminent scientists. Plan to be in Toronto August 7-10, 2003!

Here is a sampling of the presentations you can expect:

- **Bruce McEwen** — “The end of stress as we know it”
- **Stephen Ceci** — “From basic research to applied research and back again”
- **Elizabeth Loftus** — “Make-believe memories”
- **Steven D. Hollon** — “Treatment and prevention of depression with drugs and psychotherapy”
- **Daniel M. Wegner** — “Voodoo, spirits, and hypnosis: On misperceiving the authorship of our own actions”
- **Claude Steele** — “Contingencies of social identity: Their implications for achievement and intergroup relations”
- **Lila Gleitman** — “How children learn the meaning of words”
- **Edward Taub** — “CI Therapy: A new behavioral intervention in neurorehabilitation and its effect on brain organization - from primate laboratory to human clinic”
- **Gary L. Wells** — “Improving police line-ups: A successful application of scientific psychology”
- **John Jonides** — “Modules of working memory in mind and brain”
- **William E. Cross, Jr.** — “Advances in the psychological discourse on Black identity: 1960 - present”
- **Janice Kiecolt-Glaser** — “Love, marriage, and stress hormones: How close relationships influence health”
- **Mortimer Mishkin** — “The joists and tiers of memory”



The Board of Scientific Affairs will sponsor a special program with several new NIH Directors, “**Research Priorities for NIH Institutes.**” It will feature Directors **T. K. Li** (National Institute on Alcohol Abuse and Alcoholism), **Thomas Insel** (National Institute of Mental Health), and **Nora Volkow** (National Institute on Drug Abuse). This will be a terrific opportunity to hear directly from top Institute officials about the research priorities and plans of the largest supporters of behavioral research at NIH.

**For more information about the APA Convention, including registration, hotels, and travel, please visit: [www.apa.org/convention](http://www.apa.org/convention).**

The Science Directorate will produce a web-based summary of Convention science programming by late June. Check our website ([www.apa.org/science](http://www.apa.org/science)) for more information in early summer. A limited number of paper copies will be available at the Science Directorate booth at Convention.

**See you in Toronto!**

## Norman Anderson Meets with NIMH Director Tom Insel

by Karen Studwell, Public Policy Office

**O**n January 3, APA CEO Norman Anderson began his tenure at APA with a visit to the National Institute of Mental Health, the largest federal funding source for behavioral research. Anderson met with the new NIMH Director Tom Insel, to discuss how APA and NIMH can work together to increase support for behavioral research and to fulfill NIMH's mission to reduce the public health burden of mental illnesses. Kurt Salzinger, Executive Director for Science, Merry Bullock, Associate Executive Director for Science, and science policy staff Karen Studwell also participated in the meeting.

Insel has led NIMH since November 2002, and has been busy hearing from the various branches of the institute. While he has no immediate plans for major organizational changes to the institute, he did indicate an interest in increasing the pool of behavioral

neuroscientists in the intramural program.

Another goal for NIMH is reducing the burden of depression by developing and translating new treatments as well as determining the mechanisms of its relationship with other diseases. Eventually, Insel would like NIMH to map at least one gene that indicates vulnerability for mental disorders. Like the new NIH Director, Elias Zerhouni, Insel is also interested in improving NIMH's ability to fund translational research that bridges the gap between research and practice. Reducing the time for interventions to become adopted into practice will go a long way in reducing the burden of mental illnesses, and APA's members are in a unique position to collaborate with other scientists on meeting this goal. Insel also would like to see NIMH reduce the stigma of mental illness, as well as increase support for suicide research.

Additionally, Insel stated that current advances in animal research are providing answers to research questions for a range of conditions, from PTSD to the emotional memory of learning.

As is often the case, the goals of NIMH may be limited by the federal funding for research. While NIMH finally received its FY 03 appropriation of \$1.35 billion, a 9 percent increase, President Bush has proposed a scant 2 percent increase for NIH for FY04. Such budgetary restrictions will require difficult decisions about priorities as Insel develops a research agenda for the institute.

Insel is looking forward to working with APA and its members during his tenure at NIMH. He will address these issues and others related to the behavioral research portfolio at NIMH during a session scheduled for Friday, August 8, from 10:00 a.m. to 12:00 noon at the APA Convention in Toronto. ■

15

## New NIDA Director Announced

by Geoffrey Mumford, Public Policy Office

**O**n January 23, Dr. Elias Zerhouni, Director of the National Institutes of Health, confirmed the appointment of Nora Volkow as the next Director of the National Institute on Drug Abuse. The appointment fills the last vacancy within the triumvirate of NIH Institutes (along with NIAAA and NIMH) that has long been aligned to manage the nations substance abuse and mental health research portfolio.

Dr. Volkow will come to NIDA following an impressive research career that has variously been funded by NIAAA, NIDA, and the Department of Energy (DoE). The DoE support, which at first glance would seem an unusual funding source for a drug abuse researcher, combined with funding from NIDA, has allowed Volkow to establish a leadership role in the field of neuroimaging research.

Dr. Volkow is expected to take the helm at NIDA in mid-April, leaving her post as Associate Director for Life Sciences at Brookhaven National Laboratory (BNL) where she is also the Director of Nuclear Medicine and Director of the NIDA-DOE Regional Neuroimaging Center.

One of Dr. Volkow's colleagues, psychologist Arthur Stone, Vice-Chair of the Department of Psychiatry said "Nora Volkow is an extremely productive, well-regarded scientist who is at the forefront of understanding brain-behavior interactions through innovative applications of neural imaging. She is an excellent choice as the director of NIDA."

That praise was echoed by someone who had been there himself. "Nora Volkow's appointment as Director of NIDA is ideal. She is a fine scientist with a broad vision of the science needed to advance

the understanding of addiction and what to do about it. She also fully understands the public health aspects of the problem and I predict will provide superb national leadership," said APA member and former NIDA Director, Alan Leshner, when asked about Dr. Volkow's appointment.

During his tenure with NIH, Dr. Leshner, was fond of citing Volkow's work in congressional testimony where the marriage of high tech imagery and cutting edge neuroscience provided stunning visual depictions of the addicted brain on Capitol Hill.

Dr. Volkow's interest in imaging dovetails nicely with recent initiatives in the Science Directorate. Two Advanced Training Institutes have been devoted to functional Magnetic Resonance Imaging (fMRI) and will provide common ground for our introductory meeting with her when she arrives this spring. ■

## Head of NIH'S Behavioral Research Office Promoted to NIH Deputy Director

by Patricia C. Kobor, Public Policy Office

National Institutes of Health Director Elias A. Zerhouni, recently announced the appointment of Raynard S. Kington as the new Deputy Director of the National Institutes of Health (NIH). Kington replaces Ruth Kirschstein, who moved in December to the position of Senior Adviser to the NIH Director.



RAYNARD S. KINGTON

16 Dr. Kington, only the second director of the NIH Office of Behavioral and Social Sciences Research (OBSSR), has won high marks from the research advocacy community for helping make new opportunities for behavioral research at NIH. Dr. Kington has championed a place at the table for behavioral research on health disparities and helped cement that focus when he was appointed to a committee advising the new NIH Center for Research on Minority Health Disparities. Other research opportunities championed by OBSSR under Kington's tenure include methodological research on measures of community health, and research on the links between education and health.

Dr. Kington has served as NIH Associate Director for Behavioral and Social Sciences Research and Director

of the OBSSR since November 2000. He also served as the Acting Director for the National Institute on Alcohol Abuse and Alcoholism (NIAAA) from January 2002 until September 2002 after the retirement of Enoch Gordis.

Dr. Kington came to NIH from the Centers for Disease Control and Prevention (CDC) where he led the National Health and Nutrition Examination Survey (NHANES), a comprehensive, ongoing survey of the

health status, health behaviors, and diet of people in the United States.

Before joining the CDC, Dr. Kington was a Senior Scientist at the RAND Corporation, where he co-directed the Drew/RAND Center on Health and Aging. He earned undergraduate and medical degrees from the University of Michigan and then completed his residency training in Internal Medicine at Michael Reese Medical Center in Chicago. He attended the University of Pennsylvania as a Robert Wood Johnson Clinical Scholar, earning his MBA and his PhD in Health Policy and Economics from The Wharton School at the University of Pennsylvania.

Dr. Kington's research has focused on social factors as determinants of health. His research has included studies of the role of socioeconomic status in explaining differences in health across populations; the determinants of health care services utilization; the health status and health behaviors of Hispanic and black immigrant populations; and the economic impact of healthcare expenditures among the elderly. He is board-certified in Public Health and Internal and Preventive Medicine. ■

### Large-Scale Data Sets Training Opportunity--Apply Now!

Apply to an ATI geared towards a practical and hands-on approach to understanding and using longitudinal data at the University of North Carolina at Chapel Hill, **August 11-16, 2003.**

Learn to use longitudinal data from NICHD's Study of Early Child Care (SECC) in APA's Advanced Training Institute (ATI). 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. Workshops include lecture, discussion, and hands-on computer sessions.

Through a grant from NICHD, training institute costs for transportation, lodging, food and materials will be covered. Upon acceptance, participants will be asked to pay a small registration fee (\$200 for faculty, \$100 for post-doctoral and graduate students). If you have any questions, send an email to [ati@apa.org](mailto:ati@apa.org). Please check our website [www.apa.org/science/ati-info.html](http://www.apa.org/science/ati-info.html) for final details.

**Application Deadline: May 15, 2003**

## AN INTERESTING CAREER

### Cynthia Null Discusses Research and NASA

In the beginning, I planned on becoming a college professor, since all my role models were college professors. I observed a certain enthusiasm in their work, something that was highly visible in my major professor, David Wessel. He had taken his passion for discovery and his love of music and turned it into a research agenda and enthusiastic teaching. I hoped to find such passion in my career, whether that entailed teaching, research, or mentoring.

My professional life after graduate school began in a traditional manner. After receiving a PhD in quantitative Psychology from Michigan State University, I became an assistant professor of Psychology at the College of William and Mary and officially remained there for nineteen years. In addition to the usual responsibilities to teach and do research, I was also expected to be the statistical consultant for the department.

Before the age of the personal computer (PC), I had set up a computerized laboratory for my own work, so when PCs eventually became standard research tools, I helped get public laboratories located in the Psychology Department and filled them with experimental tools in addition to the standard office applications. My research focused on understanding the application of multidimensional scaling (MDS) techniques to the study of perception, and the development of new algorithms for MDS. I was an active collaborator in studies on parenting, attribution, pilot workload, small group social structure, and so forth.

Over the years, I had become active in several scientific societies, including the Psychometric Society, of which I was named treasurer in 1981. An advantage of being an officer of any society is



**Dr. Cynthia H. Null is a Research Psychologist at the Human Factors Research and Technology Division, NASA Ames Research Center. Dr. Null received her PhD in Quantitative Psychology from Michigan State University in 1974. Before joining NASA she was a member of the faculty of the Psychology Department at the College of William and Mary. Her interests are in aviation safety and human-centered design processes.**

visibility within your profession. Probably in part due to these society activities, I was asked to become the Executive Director of the Federation of Behavioral, Psychological and Cognitive Sciences in 1983. My eclectic research history was a great help to me, as I was called upon to talk about the importance of research by our entire research community.

Working in Washington was very exciting. Although I could spend only a few hours a month thinking about my own research, I believed that the work of the Federation was important in keeping the federal research funding viable for our discipline. From colleagues at the APA, COSSA and other science organizations in DC, I quickly learned about working on the Hill, how to influence funding agency priorities and advocate for agency budgets with Congress. Just as the

Federation continues to do today, we lobbied, we ran educational seminars for congressional and agency staff, we wrote science policy papers, and we worked with the science community at large.

Colleagues often asked if I missed teaching. I usually responded that I was still teaching—on a short time scale of two minutes a lecture. I was explaining the importance of research into human and animal behavior and performance, broadly defined. Working on science policy issues, such as the use of animals in research or academic freedom, was very different from research, but equally important.

In 1987, my lobbying career came to an end. Although William and Mary had generously let me have a four-year leave of absence, they said it was time to come home. It was wonderful getting back to teaching and research. I had always been passionate about teaching. With my experience in Washington I gained a broader perspective of my discipline.

I came back to teaching with this broader perspective, and an increased enthusiasm. I completed the research for the grant that had floundered while I was in Washington, and I finally put together the facilities I needed to pursue my research passion that had begun with my dissertation --auditory perception of complex stimuli.

In 1990, I was asked to visit the Human Factors Research Division at NASA Ames Research Center. They were looking for someone to head one of their research branches. This would involve closing my research laboratory and moving to California. I knew in advance that continuing my research and being a manager at NASA was not possible. I came to learn that this Division had an

...continued on next page

**Interesting Career...**  
*continued from previous page*

incredibly strong research base. In addition, they were working on solving real world problems in aerospace human factors. We moved at the beginning of 1991.

When everything is working as planned, the basic research findings drive applied solutions, and the questions that arise when solving applied problems lead to the next theoretical question. It was very easy to be passionate about the work that is ongoing. Although I began as a branch manager, in a few years I was asked to manage money instead of people. In this capacity I helped shape NASA's Aviation Safety Program. Today, we are beginning to see the products that resulted from plans made five years ago. It is hard not to believe that what we do as a division is important.

In the wake of recent events, it is difficult not to think about family, extended families, and the importance of professional and personal relationships. Without the support of my husband and daughter, I could not have done all the things I have done already in my career. In my early years, I had the support of my parents. The summer before my junior year, my father introduced me to Professor John Millholland on the quad at the University of Michigan. When he learned that I was a mathematics major he said that I should come to graduate school in Psychology, though I'm sure neither of them was particularly happy with my choice of Michigan State University.

I'm not sure I would have ended up in quantitative psychology without that incredibly short conversation. How I have moved from one career to another, or even one service job to another is mostly a mystery. My colleagues have been as important to me as my work. Without collaborators my research would not have been as interesting. I realized a few years ago that I have never gotten a job I've applied for. Fortunately, I've been offered many jobs and then been asked to complete the application. Taking advantages of opportunities has shaped my career.

Nearly three years ago, my career completed a circle. I am teaching a class in human centered design for aerospace engineers in the Engineering School at Stanford. I was given the opportunity to leave management and build a research laboratory. Although I continue to keep my hand in planning future research efforts related to the human factors of space operations for NASA, my focus is on my new career and my own research. The journey has been exciting and rewarding. I am reminded of a T.S. Eliot quote that I first encountered on a visit to the Air and Space Museum shortly after I finished my PhD:

*"We shall not cease from exploration  
 And the end of all our exploring  
 Will be to arrive where we started  
 And know the place for the first time."* ■

**New National Research Council Study on Evaluating Graduate Science Programs**

The National Research Council (NRC) has undertaken a study to provide recommendations to the National Academy of Sciences for its survey and rating of graduate programs. As part of this study the committee delineates science fields and subfields. This is of concern to psychologists for two reasons. One is that psychology is listed only with social sciences, not with natural sciences (which makes the status of programs in cognitive/behavioral neuroscience ambiguous, for example), and the second is that there have been issues about whether clinical and counseling programs will be included in the ratings (they were excluded in the last assessment in 1995).

APA has met several times with the NRC staff, Charlotte Kuh and Jim

Voytuk, who are directing this study. They met with the Board of Scientific Affairs in 2002, there was correspondence in the interim, and they met with Paul Nelson (Education) and Merry Bullock (Science) in December 2002 in what appeared to be a fruitful meeting. During the meeting, they discussed a rubric for selecting research-oriented clinical and counseling programs (PhD programs in academic institutions). In addition, at the NRC's request, APA sent a list of subfields in psychology. COGDOP has also been actively involved.

Psychology's concerns have been heard. A recently posted new taxonomy includes the following subfields: Clinical, Cognitive, Counseling, Developmental, Experimental, Quantitative, Social, Psychology - Other (see [www7.nationalacademies.org/resdoc/Draft\\_Taxonomy.html](http://www7.nationalacademies.org/resdoc/Draft_Taxonomy.html)). APA will continue to work to represent the interests of the scientific community. ■

**UNESCO and Education**

With the impending re-entry of the US into UNESCO, there has been a flurry of meetings of groups planning how US organizations might participate. APA has participated in several such meetings.

Recently, there was a meeting in the education community – UNESCO's World of Education – to discuss US input on a variety of UNESCO priority areas. Judith Torney-Purta (University of Maryland, incoming APA Committee on International Relations in Psychology member, and former member of the US UNESCO Commission) represented APA, and offered APA members as a source of expertise. She distributed statements on how behavioral science knowledge and expertise could facilitate UNESCO action in 5 of their priority areas. ■

18

## New Staff in Science



The Science Directorate welcomes Frank Beylotte as their new Science Affairs Program Assistant. Before joining APA, Beylotte was a research assistant for the Department of Veteran's Affairs, at the Medical University of South Carolina and later at Johns Hopkins University.

As the Science Affairs Program Assistant, Beylotte's primary role is to assist the Scientific Affairs staff in researching current issues such as research regulation, testing and assessment and other specialized projects.

His diverse interests in psychological science bring him to his current position. "This position with the Science Directorate will afford the opportunity to allow these interests to flourish," he stated. Beylotte will receive his masters in psychology in May 2003 from Johns Hopkins University. He is originally from Charleston, SC. ■

## CARE Video Series

The second segment of the CARE video series on the contributions of nonhuman animals research in diverse basic and applied areas in behavioral science was previewed by the APA Council of Representatives at its meeting in February.

This second segment, entitled *Importance of Laboratory Animal Research in Psychology: Psychopharmacology* features psychopharmacological research that demonstrates how behavioral experiments using laboratory animals

have been and continue to be important to (1) understanding the effects of different classes of psychoactive drugs on mood and behavior, (2) determining the neurobiological and environmental variables that are responsible for particular effects of psychoactive drugs, and (3) developing effective treatments for emotional and behavioral problems, including drug abuse.

Currently under development is a study guide that elaborates on the research depicted in the segment, which will be included with the video. A running time

of approximately 15 minutes allows for easy integration of the video into classroom lesson plans. Although the primary audience is high school students the video can also be used in early college courses to initiate discussions on the relevance and ethics of research with animals other than humans.

The expected release of the video, which will be available through the APA Order Department at [order@apa.org](mailto:order@apa.org) or 1-800-374-2721, is early summer 2003. ■

19

### *Behavior Matters!*

We all know that our behavior, and the behavior of others around us, influences our lives. But how many of us can identify specific behavioral research that has helped us improve our wellbeing and our environment?

A new publication, *Behavior Matters: How Research Improves Our Lives*, helps do just that. Filled with illustrative examples, *Behavior Matters* demonstrates how behavioral research has led to innovations in health, safety, education, and social interactions.

The brief examples are offered to pique readers' interest, and references are provided for more in-depth information on each topic. A compact and colorful booklet, written in engaging and easy-to-understand language, *Behavior Matters* is an excellent resource to reach students as well as the general public.

This booklet focuses on psychological research, in concert with APA President Philip Zimbardo's initiative: *Psychology Makes a Significant Difference!* It is the first of a series to be published for the Decade of Behavior.

Join the Decade and APA in spreading the word that behavior matters— you can order copies of the booklet or view it as a PDF file online by visiting: [www.decadeofbehavior.org](http://www.decadeofbehavior.org).

**SCIENCE DIRECTORATE STAFF**

Kurt Salzinger, *Executive Director for Science* (ksalzinger@apa.org)  
 Merry Bullock, *Associate Executive Director for Science* (mbullock@apa.org)  
 Virginia E. Holt, *Assistant Executive Director for Science* (vholt@apa.org)  
 Carmen Anderson, *Testing Programs Assistant* (cdanderson@apa.org)  
 Francis Beylotte, *Science Affairs Program Assistant* (fbeylotte@apa.org)  
 Marianne Ernesto, *Director for Testing & Assessment* (mernesto@apa.org)  
 Halah Gordon, *Administration Manager* (hgordon@apa.org)  
 Amena S. Hassan, *Science Communications Officer* (ahassan@apa.org)  
 Tamar Brown Maranto, *Dir. for Psychology in the Workplace* (dmaranto@apa.org)  
 Deborah McCall, *Science Programs Manager* (dmccall@apa.org)  
 Sangeeta Panicker, *Research Ethics Officer* (spanicker@apa.org)  
 Wesley Pinkney, *Senior Secretary* (wpinkney@apa.org)  
 Tamar Simmons, *Administrative Assistant* (tsimmons@apa.org)  
 Jonathan Tin, *Science Programs Associate* (jtin@apa.org)  
 Suzanne S. Wandersman, *Director for Governance Affairs* (swandersman@apa.org)  
 Keren Yairi, *Special Projects Associate* (kyairi@apa.org)

**PUBLIC POLICY OFFICE STAFF**

Ellen Garrison, *Director for Public Interest Policy* (egarrison@apa.org)  
 Nina Gail Levitt, *Director for Education Policy* (nlevitt@apa.org)  
 Geoff Mumford, *Director for Science Policy* (gmumford@apa.org)  
 Deborah Cotter, *Legislative Assistant for Public Interest Policy* (dcotter@apa.org)  
 Daniel Dodgen, *Sen. Legislative and Fed. Aff. Officer* (ddodgen@apa.org)  
 Lori Valencia Greene, *Sen. Legislative and Fed. Aff. Officer* (lgreene@apa.org)  
 Heather O'Beirne Kelly, *Sen. Leg. and Fed. Aff. Officer* (hkelly@apa.org)  
 Patricia C. Kobor, *Senior Science Policy Analyst* (pkobor@apa.org)  
 Jeff J. McIntyre, *Legislative and Federal Affairs Officer* (jmcintyre@apa.org)  
 Jennifer Beard Smulson, *Legislative and Federal Affairs Officer* (jsmulson@apa.org)  
 Karen Studwell, *Legislative and Federal Affairs Officer* (kstudwell@apa.org)  
 Eva C. Vega, *Executive Associate* (evega@apa.org)  
 Alison Wilkins, *Administrative Assistant* (awilkins@apa.org)

**APA WORLD WIDE WEBSITE: [www.apa.org/science](http://www.apa.org/science)**  
**GENERAL SCIENCE DIRECTORATE E-MAIL ADDRESS: [science@apa.org](mailto:science@apa.org)**

**PSYCHOLOGICAL SCIENCE AGENDA**

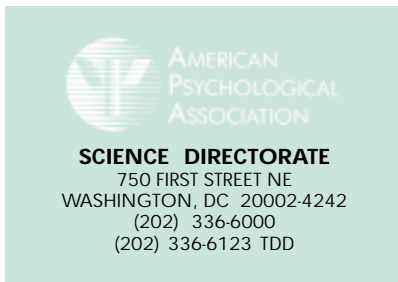
*Psychological Science Agenda* is published seasonally by APA's Science Directorate. Dedicated to promoting and serving scientific psychology, *Psychological Science Agenda* provides news about national scientific policy developments, examines policy issues affecting and affected by the behavioral research 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 23,000 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. Phone: (202) 336-6000. Fax: (202) 336-5953. TDD: (202) 336-6123. E-mail: [science@apa.org](mailto:science@apa.org)

**BOARD OF SCIENTIFIC AFFAIRS**  
 Suzanne B. Johnson, (Chair)  
 David Barlow  
 Linda M. Bartoshuk  
 Gwyneth M. Boodoo  
 Marilyn E. Carroll  
 Jacquelynne E. Eccles  
 Jo-Ida Hansen  
 Roberta Klatzky  
 Harry T. Rels

**EXECUTIVE DIRECTOR FOR SCIENCE**  
 Kurt Salzinger  
  
**CHIEF SCIENCE ADVISOR**  
 Gordon H. Bower  
  
**EXECUTIVE EDITOR**  
 Virginia E. Holt  
  
**EDITOR,**  
**PSYCHOLOGICAL SCIENCE AGENDA**  
 Amena S. Hassan



NON-PROFIT  
 U.S. POSTAGE  
 PAID  
 WASHINGTON, DC  
 PERMIT #6348