



## Congress Approves Increases for NIH but Fails to Protect Peer Review

by Karen Studwell, Senior Legislative and Federal Affairs Officer

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On Wednesday, September 9th, the House passed its version of the FY 2005 Labor, Health and Human Services and Education Appropriations bill (L-HHS), providing a \$727 million increase to the National Institutes of Health (NIH) and raising its budget to \$28.5 billion. Unfortunately, the bill also provided a vehicle for members of Congress to attack two individual research grants funded by the National Institute of Mental Health (NIMH) that were seen as frivolous by some Representatives. According to the amendment sponsor Rep. Randy Neugebauer (R-TX), "...Grants to questionable studies like dorm room wall decorations cloud many of the good things that the National Institute of Mental Health does and can do..."

This grant was actually an exploratory research grant on identity and self-expression by psychologist Samuel Gosling at the University of Texas, Austin. The other grant had been made to psychologist Laura King at the University of Missouri, Columbia. King was awarded the 2001 APA Templeton Positive Psychology Prize for her research that focuses on the health benefits of writing about positive life goals. Funding for both grants was completed and neither was due to receive funds in FY05. This fact may have protected them from real harm,

as they won't lose any federal research dollars because of this amendment.

However, this fact also gave House members an excuse not to oppose the amendment. Chairman Ralph Regula (R-OH), who so passionately spoke in support of sexual health research and peer review last year during the debate on a similar amendment, declined to oppose this amendment, stating, "I am not going to oppose this in a vote because the grants are over. They have been completed. The amendment does not have any impact, in essence..."

Whether this amendment has any impact is debatable, as attacks on meritorious research for political purposes may send a chilling effect throughout the scientific community. Some members did speak out against the amendment, including Rep. Kenny Hulshof (R-MO) who submitted King's c.v. for the Congressional Record and stated that, "I know that is certainly great fodder for an election-year press release, but I would say to the gentleman that the grant itself does have substance."

APA and the Coalition to Protect Research alerted scientists and congressional staff on Tuesday, September 7th to this possible amendment and we thank all those who contacted their Members in Congress to oppose the amendment. As the amendment was passed

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on a voice vote, when only those few members who were on the floor could vote, there is no record of individual votes. Given the months of education that CPR and others in the community have done to increase support for peer review, advocates were disappointed that a recorded vote was not requested.

The issue is not settled yet, however. The amendment language will still have to survive a conference with the Senate version of the bill and APA and other scientific organizations will be working to ensure that the language is stripped from the final FY05 L-HHS appropriations bills. To read the Neugebauer amendments and learn more about this issue, please go to: <http://www.apa.org/ppo/issues/neugebaueramdt04.html>. ■

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## PSY21: A New Science Initiative

The APA Council of Representatives came through again for the psychological science community by approving a significant new initiative as part of the Association's 2005 budget. Psychological Science for the 21st Century (PSY21) will begin activities officially in January 2005.

You may already have heard about PSY21, an important set of activities that will be spearheaded by the Board of Scientific Affairs (BSA) and the Science Directorate to help psychology meet the opportunities and challenges of the 21st Century. The three major areas of attention in PSY21 are promoting and recognizing service to the discipline, advancing the infrastructure requirements for scientific psychology, and supporting the responsible conduct of research.

and broadcast the opportunities and to provide tools to the discipline to tackle the challenges. "PSY21 represents a new day for science at APA," stated Steve Breckler, Executive Director for Science. "It will allow us to build on already-strong programs, and to significantly expand and enhance our service to the science of psychology."

A number of activities will begin in 2005, among them a Science Leadership Conference, task force on the responsible conduct of research, and the initial stages of an awards program for service to the discipline. Other important programs will be added as PSY21 develops. BSA and Directorate staff are making concerted efforts to give members opportunities for direct involvement in several of these activities.

PSY21 creates a solid foundation on which the APA Science Directorate will build an ambitious and effective agenda to support, promote, and advance the science of psychology. At the same time, these activities will be important in APA's efforts to provide value to its membership, and to attract new members. For more information on PSY21's planned activities, visit <http://www.apa.org/science/psy21.html>. ■

### 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>.

Along with new opportunities, psychology also faces new challenges. These include developing skills and mechanisms for trans-disciplinary, problem-based research approaches; balancing increasing specialization while maintaining the unity of the discipline; building a pipeline to assure a strong next generation of psychological scientists; and working within increasingly complex regulatory systems. APA is uniquely positioned to champion



## EXECUTIVE DIRECTOR'S COLUMN

STEVEN BRECKLER, Executive Director for Science

### Where's the Science?

The discipline of psychology can be divided and sub-divided in many ways. The organization of the APA office itself reflects one such division, with a Directorate devoted to the science of psychology, a second to the practice of psychology, a third to education, and a fourth to psychology in the public interest. This structure is not at all arbitrary – it reflects quite closely the distinct identities that psychologists tend to assume. Of course, the unfortunate consequence of dividing is that it creates a demand to choose. Are you in science, or are you in practice? Choose one, please.

The membership divisions of APA reflect another way of representing disciplinary diversity. APA currently supports 53 divisions, from general psychology (Division 1) to pharmacotherapy (Division 55), from experimental psychology (Division 3) to clinical neuropsychology (Division 40), and almost everything you can imagine in between. The divisional architecture, like the APA office, is not arbitrary. The divisions reflect the major subfields of our discipline. Yet, once again, it creates a demand to choose. You may join as many as you like. But is your primary affiliation with Division 7 (Developmental Psychology) or Division 37 (Child, Youth, and Family Services)? Choose one, please.

The need to classify and identify applies to Divisions as well as to individuals. It seems important to know whether a Division belongs to Science, Practice, Education, or Public Interest (or something else entirely). Most of the single-digit Divisions (3, 5, 6, 7, 8) are typically identified as Science Divisions. The practice of psychology – clinical psychology, counseling psychology, psychotherapy – is more commonly represented among the higher double-digit Divisions. Some Divisions



identify closely with Education (e.g., 2 and 15), and others with Public Interest (e.g., 9, 35, 44, and 45).

I understand the need for people to classify and categorize. Still, for the sake of our discipline, we need to resist the temptation. For one thing, it leaves too many out. Although many of the APA Divisions fit neatly into one or another category, many others do not. Where does the Society for Industrial and Organizational Psychology (Division 14) fit? How about the Society for Consumer Psychology (Division 23), or the American Psychology-Law Society (Division 41)? These are important and valued Divisions of APA, yet none of them fit squarely into the science/practice/education/public interest quartet.

It is informative to ask why such Divisions do not fit neatly into one category or another. One important reason is that they actually fit into two or more. These Divisions are themselves diverse and category-spanning. Some of what their members do is clearly science, some is practice, and much is the integration of science and practice and the application of psychology in everyday settings. The work represented by these Divisions is often leading-edge science, mixed with the clinical and non-clinical practice of psychology, and typically offering insight into public interest and presenting educational challenges and opportunities.

Even when a Division does fit neatly into one category or another, the act of categorizing creates a false portrayal of unity in purpose and methods. A psychologist who identifies principally with practice can still do science; a teacher of psychology whose work centers in the classroom can still engage in the practice of psychology; a bench scientist can still be motivated by and ultimately apply science to matters of significant public interest. Forcing a person or a group into a single category implies an irrelevance to the other categories. That is not productive, nor is it typically correct.

Perhaps the most serious consequence of categorizing is one that strikes closest to the home of science at APA. It is true that a handful of single-digit Divisions do concentrate mostly on the basic science of psychology. Those Divisions represent the backbone of scientific psychology – experimental psychology, social psychology, developmental psychology, behavioral neuroscience, comparative psychology, measurement, and statistics. But it would be very misleading to conclude that these are the only places where you can find scientific psychology. Indeed, science can be found in almost every one of APA's 53 Divisions. Science may not occupy center stage in each one, and in some cases it may be a very small part of what they do. Still, that should not diminish the scientific value or importance of what those psychologists have to offer.

The category-spanning Divisions of APA enjoy an enviable position. They have multiple homes within the organization. Whenever someone asks me where the science is at APA, I always reply that it is everywhere. The Science Directorate welcomes all science that is done in support of psychology, regardless of Divisional origin, Directorate identity, or affiliation with other scientific societies. ■

## Science Informing Policy. Can it Work?

by Merry Bullock, Associate Executive Director for Science

**4** The dream of every science policy wonk is that the best science will inform the ways that decision makers frame issues, consider solutions, decide on programs and implement outcomes. Such a goal underlies the What Works Clearinghouse (WWC), a new initiative to provide evidence for education intervention and policy. The WWC (see <http://www.w-w-c.org>) is the brainchild of a broad collaboration, including the Department of Education, the founders of the Campbell Collaboration (<http://www.campbellcollaboration.org> - an organization devoted to soliciting and disseminating systematic reviews of the effectiveness of behavioral and social interventions on societal issues), and others. Funded by the Department of Education, the WWC has begun modestly with systematic reviews on two topics: peer-assisted learning strategies and middle school mathematics programs. But the long term goal is to provide evidence on a broad range of intervention topics from character education to adult literacy.

How this endeavor fares, the issues it raises, and the product it releases, will have a strong impact on the education and science communities. If it works well, it will be a model for one strategy to get science to policy makers; if it doesn't, it will be an example of how battles within the science and education communities on methodology, values, training and tradition interact with large scale, top down mandates to influence a complex policy and research system. In either case, the WWC and responses to its goals and methods is an interesting case study that raises issues about the very definition of science, research and outcome, and that has the science community abuzz with both praise and criticism.

Modeled on the Cochrane Collaboration, which collects and disseminates systematic reviews on medical interventions, the idea behind the WWC is to provide policy makers - those who

decide about curricula and other education issues -- with a resource that will give them "the best available scientific evidence" about which potential interventions work and which do not. Pretty much everyone would agree that is a good idea. But there is hearty disagreement among researchers on the rest of the equation -- including the definition of "best scientific evidence", systematic review, and scientific research.

At one end of a continuum are those who hold random controlled trials (RCT) designs as the ultimate gold standard for providing valid evidence because this is the only design that can control for bias. At the other end are those who claim that relying on RCT trials will not provide viable information - either because it is practically impossible to achieve random control in school settings or because experimental designs will miss the complexities of school-based behavior, or because such information will be incomplete. This is a classic debate between those who require the experimental design that allows the most unambiguous inferences about causation (RCTs) and those who require designs that mirror the complexity of the phenomenon studied. The WWC's compromise position is to include "comparison studies that use carefully matched groups and 'regression continuity designs,' which are experiments that use a cutoff point to separate comparison groups and to statistically account for differences between groups." What the WWC does not include are case studies, surveys, studies that rely on pre- and post-test data, and descriptive reports, exclusions that have been criticized by some in the educational research community who argue that much educational policy is based on just such research because it is the only kind that can be reasonably collected.

Presently, the WWC welcomes input and suggestions for specific interventions related to "current WWC Reports, studies or study citations on the

effects of educational interventions..., and/or nominations for other interventions, studies, or future topics that you would like to see considered for review by the WWC. You can also nominate a specific intervention, such as a particular curriculum, rather than an entire class of interventions, such as math curricula. Suggestions can be made on the WWC web at <http://www.w-w-c.org/submit>.

In addition, the WWC is creating a "registry of evaluators" - an online database individuals or organizations who conduct research on the effects of replicable educational interventions. The registry will be used to help schools, school districts, and educational program developers identify potential evaluators (and presumably will provide a source of intervention evaluations as a basis for reviews of what works). See the WWC web (<http://www.w-w-c.org/evaluators/overview.html>) for further information. ■

## SCIENCE BRIEFS

## Laughing Matters

by Jo-Anne Bachorowski and Michael J. Owren



**Jo-Anne Bachorowski** received her doctoral degree in Clinical Psychology from the University of Wisconsin-Madison in 1991. She is currently Associate Professor of Psychology and Co-Director of the doctoral program in Clinical Science at Vanderbilt University. Her research is broadly concerned with vocal communication, and focuses on the production and perception of speech acoustics, emotional speech, and laughter. The approach taken to her work falls at the intersection of clinical, social, and cognitive science.



**Michael J. Owren** received his B.A. in Psychology from Reed College, and his PhD in Experimental Psychology from Indiana University. He is currently an Assistant Professor the Department of Psychology at Cornell University, and directs the Psychology of Voice and Sound Research Lab.

### Laughing Matters

Laughter is seemingly ubiquitous in human social interactions, and yet we know surprisingly little about this unique human sound. We began studying laughter in part as a way to understand indexical, or personal, cues in vocal signals. Our reasoning was that in laughter we could measure the acoustic properties associated with characteristics like the vocalizer's biological sex and individual identity without the confounds of linguistically related components. We quickly learned that laughter is an extraordinarily rich vocal signal that is worth studying for its own sake, especially given the apparently key role it plays in human social interactions and relationships.

### The Sounds of Laughter

Laughter emerges early in human development, being reliably elicited through tickling by about 4 months of age (Sroufe & Waters, 1976). Children born both deaf and blind also laugh at roughly the same age (Eibl-Eibesfeldt, 1989), indicating that this signal

is deeply rooted in human biology (Deacon, 1989). Although sometimes regarded as a stereotyped signal (Provine & Yong, 1991), meaning that it tends to be constant in form, we have instead found laughter to be remarkably variable. In fact, laughter may be better thought of as a broad class of sounds with relatively distinct subtypes, each of which may function somewhat differently in a social interaction.

In order to characterize the acoustic features of laughter, we analyzed a corpus of 1024 laughs that were produced by 97 college-aged adults as they watched two humorous film clips (Bachorowski, Smoski, & Owren 2001).<sup>1</sup> The first salient finding was that laugh sounds can be readily grouped into voiced and unvoiced varieties. Voicing means that there is regular vibration of the vocal folds during production, giving the sound a tonal, vowel-like quality. The rate of that vibration is termed the fundamental frequency (F<sub>0</sub>), which is an important contributor to the perceived pitch of the sound.

Voiced laughs are the versions that are commonly thought of as typical laughter, and can have a song-like quality if F<sub>0</sub> happens to fluctuate in a melodic way over the course of several bursts. Unvoiced laughs can be very similar to voiced versions, but lack regular vocal-fold vibration. That makes them noisy and atonal in comparison, and include sounds that can be described as grunt-like or snort-like. In the grunt-like forms, the noisiness arises from turbulence in the supralaryngeal vocal tract, while the turbulence occurs primarily in the nasal cavities in snort-like forms. Many laughs consist of a mix of voiced and unvoiced components. In our study, both males and females were found to produce all the sub-types, although males produced more grunt-like laughs than females, whereas females produced more voiced laughs than did the males.

More detailed acoustic analyses showed that laugh sounds are quite

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different from speech sounds. The average F<sub>0</sub> of laughter is, for instance, much higher than is found for speech. In speech, modal male F<sub>0</sub> values are about 120 Hz, meaning that the vocal folds are opening and closing about 120 times per second. The average male F<sub>0</sub> in laughter was found to be more than twice as high, about 270 Hz. Similar outcomes occurred in females, who show modal F<sub>0</sub> values of about 220 Hz in speech, but averaged about 400 Hz in laughter. F<sub>0</sub> ranges were also very high. Although individual laughter “calls” or syllables were only about 0.2 seconds long, their F<sub>0</sub>s changed by an average of about 60 Hz for males and 85 Hz for females over this brief duration. A talker’s pitch contour can also change over a comparable range in speech, but there the changes occur over the course of phrases or entire sentences. There were also cases of dramatically high F<sub>0</sub> values in both cases, for instance with one male producing a call of 1245 Hz (which is in the soprano range!) and one female producing a call of 2083 Hz (sounding more bird-like than human).

Another important difference from speech was that voiced laughter typically occurred as an unarticulated vowel—meaning the neutral, “schwa” sound produced when vibrating the vocal folds while leaving the vocal tract, tongue, lips, and jaw all quite relaxed. In other words, rather than resembling sounds like “tee-hee-hee” or “ho-ho-ho,” we found prototypical laughter to be a more generic or neutral sound that could be best described as “huh-huh-huh.” This lack of articulation in laughter may mean that these sounds are particularly rich in indexical cues, for instance making it particularly easy to identify individuals from hearing their laughter.

### Laughter in Social Context

As an integral part of human interaction, laughter occurs significantly more often in social than in solitary situations (Provine & Fischer, 1989). Even in a controlled laboratory environment, participants in the Bachorowski

et al. (2001) study produced copious amounts of laughter within a 4-minute window. Participants in that study were tested either alone or with a social partner, with the social partner being either a same-sex friend, an other-sex friend, a same-sex stranger, or an other-sex stranger. We were therefore able to assess whether the acoustic variability in laughter described above was differentially associated with these five contexts (Bachorowski, Smoski, Tomarken, & Owren, 2004).

Contrary to popular belief, we did not find any evidence that females laugh more than males.<sup>3</sup> We did find, however, that social context was importantly associated with sex differences in both the acoustics and rate of laughing. Male laughter seemed to be driven more by whether the social partner was a friend or stranger than whether that individual was male or female—although there was some influence of the latter as well. Specifically, males tested with a friend—especially a male friend—produced more laughter and more acoustically extreme laughs (e.g., laughs with higher F<sub>0</sub>s) than males tested with a stranger. Outcomes for females were not quite as clear, but did indicate a greater influence of the sex of the testing partner rather than whether they were a friend or a stranger. Female participants laughed more and produced more acoustically extreme laughs when tested with a male than with a female partner.

We have also examined the temporal patterning of laugh production (Smoski & Bachorowski, 2003), with an eye toward testing whether the individually distinctive laughter of a familiar social partner can elicit learned emotional responses in a listener (Owren & Bachorowski, 2003). One result providing preliminary support for this hypothesis was that friends who were tested together as a dyad were significantly more likely to laugh within one second of each other than were participants who were paired with strangers. Sex differences were also found in this “antiphonal” laughter, with females

laughing more quickly than males in response to the partner beginning to laugh. This outcome suggests that signaling in females may be more finely tuned to social circumstances than in males.

### Laughter Elicits Positive Emotion-Related Responses in Listeners

Following up on the remarkable acoustic variability of laughter noted earlier, we have gone on to test whether listeners in fact respond differently to different laugh sounds. The most obvious contrast to try was whether the laugh was voiced or unvoiced, and to have listeners simply rate how positive each sound was to them (Bachorowski & Owren, 2001). Five sets of listeners were asked to rate 70 laugh sounds, with each group responding to a different question: how positive or negative their emotional response was upon hearing each sound, how much they would like to meet the laugher, how sexy the laugher sounded, how friendly the laugher sounded, or how well they thought the laugh would work on a laugh track. Regardless of which question was posed, voiced laughs elicited much more positive ratings than did unvoiced laughs. This effect suggests that voiced laughter in particular elicits positive emotional responses in listeners.

Owren, Trivedi, Schulman, and Bachorowski (2004) then confirmed that this fundamental difference also occurred even if laughs were not explicitly attending to how positive or negative the sound was. Rather, the goal was to test whether voiced and unvoiced laughs triggered different automatic evaluations (Fazio & Olson, 2003). The task used was a version of the implicit association test (Greenwald, McGhee, & Schwartz, 1998), with participants pressing a button labeled “voiced” on the response box if a laugh they heard was voiced, and pressed a button labeled “breathy” if it was unvoiced. They were also asked to use the same buttons in the same way for another simple task, this time clas-

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sifying each of spoken words as being either “pleasant” (e.g., love, vacation) or “unpleasant” (e.g., death, vomit). Finally, the two tasks were combined, still with only one sound heard on each trial, but randomly interspersing laughs and words. Response labels were also combined for the two buttons, being paired either as “voiced or pleasant” and “breathy or unpleasant,” or as “voiced or unpleasant” and “breathy or pleasant.” The results showed clear effects of how the labels were paired. When response options paired the two hypothesized positives (“voiced or pleasant”) versus the two hypothesized negatives (“breathy or unpleasant”), responses were significantly faster than when the labels were paired incongruently. In other words, automatic responses to these laugh sounds closely paralleled findings from the explicit rating task: Voiced laughter elicited much more positive evaluation than did unvoiced laughter.

### Why do Humans Laugh?

We believe that laughter likely evolved in early hominids as part of a long process of diverging from a common ancestor with chimpanzees as they invaded the new, more terrestrial niches opening up during the Pleistocene. Taking advantage of new ecological opportunities is proposed to have put a premium on coordinated and cooperative behavior in the new species, which among nonhumans is much more common among biological kin than among unrelated individuals. We suggest that both laughter and smiling evolved in hominids or early humans specifically because they facilitated the formation and maintenance of positive, cooperative relationships among nonkin (Owren & Bachorowski, 2001).

Theoretically, we propose that laughter “works” not because it expresses a state of positive emotion in vocalizers, but by inducing positive affective responses in others (Owren & Rendall, 1997; 2001). This affect-inducing effect thereby primes listeners to behave positively toward laughers. We thus suggest that laughing is a nonconscious strategy of social influence, a position we further

believe is supported by finding that laughers use their sounds quite differently, depending on who they are with (Bachorowski et al., 2004; Grammer & Eibl-Eibesfeldt, 1990). As outlined in detail by Owren and Bachorowski (2003), one part of the rationale is that by having shared, positive experiences together, two individuals that are becoming friends also form positive conditioned associations to one another’s laugh sounds. As a result, each can use his or her laughter to elicit positive feelings in the other. Continued, mutually positive interactions maintains those learned responses, which either of the individuals can then make use of to induce a positive emotional response when a socially challenging situation arises, such as when needing cooperation or explicit help from the other. If two individuals are strangers, laughter can still be helpful due to generalized effects learned over a lifetime of hearing laughter that is mostly associated with positive states and situations.

However, another strategy is to produce laughter with high-impact acoustic features in situations where listeners are already in a positive state. The features in question are those that tend to be attention-getting and energizing to listeners, including high-F<sub>0</sub> and dramatic F<sub>0</sub> excursions. With friends, laughter can be used both to elicit learned positive responses and to accentuate those responses using high-impact laughter. Among strangers, the situation is not so simple. A laugher cannot draw on specific learned affective response in the others, and can only use high-impact laughter to reliably good effect is the audience is biased toward the positive.

These hypothesized differences between affect-inducing direct and indirect effects, as well as the functional importance of voiced and unvoiced laughter, warrant more detailed empirical testing. Also of interest is to pit this affect-induction view against representational accounts. In the latter, laughter is treated as a linguistic-like, referential signal that provides meaning about laugher state to the listener (see Grammer & Eibl-Eibesfeldt, 1990). Acoustic variability in this perspective

emphasizes the “meaning” of laughter, such as this laugh means “I’m happy” or this laugh means “I’m anxious,” much as the linguistic contrasts used in speech production correspond with concepts that are independent of the vocalizer but are yet understood by the listener. Given the notable variability we have found in laugh acoustics, despite participant self-report of equivalent emotional states (Bachorowski et al., 2004), we favor the affect-induction perspective.

Ready extensions of this work include examining the use of laughter by individuals diagnosed with particular conditions, such as Social Anxiety Disorder, and studying the ways in which culture shapes the use of laughter. Regardless of the specific question being asked, we believe that studying laughter will give us important information about how humans establish and maintain mutually cooperative relationships. ■

### Footnotes

1 As in all our work, participants were not aware that laughter was specifically of interest until the end of their testing session.

2 For examples, go to <http://www.psy.vanderbilt.edu/faculty/bachorowski/laugh.htm>.

3 This absence of overall sex differences has since been replicated in several different laugh-production paradigms.

### Acknowledgments

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### APA Advanced Training Institutes: In What Areas Would You Like to be Trained?

The APA Advanced Training Institute (ATI) program has been extremely successful at training researchers in innovative techniques such as fMRI and structural equation modeling. ATIs are held over the summer, and last anywhere from two-and-a-half days to an entire week.

In 2005, the Science Directorate will be looking to expand the program into new areas - ideas mentioned so far have included behavioral genetics, media technologies, geographic information systems, and others. We'd like to hear more.

If there's an area you're interested in, visit <http://www.apa.org/science/ati.html>.

## Lerner and Moreno Win Presidential Early Career Award for Scientists and Engineers (PECASE)

**J**ennifer Lerner, a social psychologist at Carnegie Mellon University, and Roxana Moreno, a cognitive psychologist and education researcher at the University of New Mexico, were named this month as recipients of the prestigious Presidential Early Career Award for Scientists and Engineers (PECASE).

Each year the National Science Foundation selects nominees for PECASE from among the most meritorious new CAREER awardees. The PECASE program recognizes outstanding scientists and engineers who, early in their careers, show exceptional potential for leadership at the frontiers of knowledge. This Presidential Award is the highest honor bestowed by the United

States Government on scientists and engineers beginning their independent careers.

Lerner's research, which is co-funded by the NSF Social Psychology and Decision, Risk, and Management Science Programs, focuses on emotional influences in judgment and choice, with special emphasis on the influence of specific emotions on probability assessment, valuation, and attribution. Lerner also aims to disseminate knowledge about the effect of emotion on judgment and decision making, and about the larger field of behavioral decision research (BDR), to broader audiences of students, the public, and policymakers. Dissemination of the insights of BDR is especially important

because it has clear practical implications for both public policy and private decisions.

Moreno applies cognitive theories to educational technology, human-computer interaction, and multimedia learning. Her research examines the cognitive processes that teachers use in solving complex problems within classrooms, and seeks to develop a case-based computer application to prepare teachers to develop and use these cognitive skills within their classes. This work is funded by the NSF ROLE Program (Research on Learning and Education). Moreno was recognized earlier this year by APA Division 15 as the recipient of the Richard E. Snow Award for Early Contributions. ■

## 2004 Summer Science Institute Held at Vanderbilt University

**F**or nine days in June, 32 talented undergraduate students had the great pleasure to get their feet wet in scientific psychology with the faculty at Vanderbilt University as their guides.

The students, who represented large and small colleges and universities across the nation, gathered in Nashville to learn from a distinguished group of faculty members. Tim McNamara, then-chair of the Department of Psychology in the College of Arts and Science, and Kathy Hoover-Dempsey, chair of Psychology and Human Development at Peabody College, played key roles in the wonderful reception of the SSI program. Faculty who served as lecturers included Joanne Bachorowski, Joe Lappin, Andrew Rossi, Meg Saylor, and Georgene Troseth. Lab faculty mentors were Bruce Compas, Dan Levin, Gordon Logan, Tim McNamara, Julia Noland, Meg Saylor, Jeff Schall, and David Zald. The students were assigned to labs where they performed research projects through the week, giving detailed reports to the group at week's end.

Two remarkable graduate students, Kerstin Blomquist and Eban Walters, gave our SSI students guidance, mentoring, and friendship, and were stalwart supporters of the APA Institute leaders, Virginia Holt and Brett Pelham. In addition to the remarkable amount of mental stimulation, the students found themselves playing many games of Texas Hold'em poker, seeing the sights of Nashville, dancing on the General Jackson showboat cruise, and in non-stop conversation with one another.

SSI students for 2004 were: **Sarah Ahlfs**, College of St. Benedict; **Shante' Bassett**, Loyola College in Maryland; **Sarah Becker**, Barnard College; **Emily Breidbart**, Cornell University; **Alissa Catiis**, University of Illinois at Urbana-Champaign; **Fumiyuki Chin**, University of Maryland, College Park; **Sarah Cruce**, Bradley University; **Natalia Escobar**, University of California, Berkeley; **Heather Fulton**, Queens University; **Karla Gomez**, St. Peter's College; **Virgil Griffith**, University of Alabama; **Jennifer Guadagno**, Pepperdine University; **Ranwa Hammamy**,

St. Mary's College of Maryland; **James Head**, Santiago Canyon College; **Elizabeth Johnson**, Carleton College; **Chris Knight**, University of California, Davis; **Josh Marshack**, Washington University in St. Louis; **Brian Mathias**, Carnegie Mellon University; **Heather Mueller**, University of North Carolina, Chapel Hill; **Albee Ongsuco**, University of Maryland, Baltimore County; **Leroy Scott**, Livingstone College; **Katherine Slager**, Warren-Wilson College; **Luke Stasi**, College of DuPage; **Katherine Steele**, Harvard University; **Vanessa Tendick**, Catholic University; **Joye' Thomas**, Spelman College; **Scott Thompson**, Stanford University; **Lee Valentyn**, Carroll College, Wisconsin; **Alan Webb**, University of Virginia; **Angela White**, University of Texas, San Antonio; **Sarah Yager**, University of British Columbia; **Jessica Zina**, Regis College.

The SSI will return to Vanderbilt for its 2005 session. Announcements and program information will be available in November 2004. ■

## September 2004 Announcements

### Predocutorial Interdisciplinary Research Training Program RFA

The Predocutorial Interdisciplinary Research Training Program RFA from the US Department of Education is accepting applications. Optional Letters of Intent are due September 17, 2004, with applications due November 18, 2004. This should not be confused with the Postdoctoral Research Fellowship RFA, which is new in FY05. Both RFAs can be found at: <http://www.ed.gov/programs/edresearch/applicant.html>.

### APF Offers Three \$20,000 Graduate Scholarships in Child Psychology

The American Psychological Foundation (APF) is offering up to three \$20,000 Elizabeth Munsterberg Koppitz Scholarships to support graduate studies in child psychology in 2005.

The purpose of these scholarships is to nurture excellent scholars in the broad area of the psychology of the child, such as developmental, child-clinical, pediatric, school psychology, educational psychology and developmental psychopathology. Support will be from Sept. 1 to Aug. 31 each year. The award includes travel costs to attend the APA pre-conference workshop for Elizabeth Munsterberg Koppitz Graduate Fellows at the APA Convention and other relevant conferences as funds allow. APF will also award travel stipends of \$4,000 to runners-up to enable their travel to APA's convention and to encourage travel to other conferences as funds allow.

Graduate students who have achieved doctoral candidacy are eligible to apply. Students can apply before having passed their qualifying exams, but proof of having advanced to doctoral candidacy will be required before funds are released. Consideration will be given to psychological research that breaks new ground or creates significant new understandings that facilitate children's and youth's development or functioning.

The deadline to apply is November 15, 2004. Recipients will be announced on or after February 15, 2005. For complete application guidelines, please visit APF's website, [www.apa.org/apf](http://www.apa.org/apf).

### Funding Available to Study LGB Family Psychology

The American Psychological Foundation (APF) seeks applications for the Roy Scrivner Research Grants, which promote research on lesbian, gay, and bisexual family psychology and therapy. The Scrivner Fund provides postdoctoral grants of up to \$10,000 and graduate student grants of up to \$1,000 each, with preference given to dissertation candidates. Researchers from all fields of the behavioral and social sciences are encouraged to apply.

Applicants for the postdoctoral research award, including co-investigators, must have a doctoral degree. Applicants for the student grants must be enrolled in a graduate program and have a letter of support from their supervising professor. All research involving human subjects must be approved by an institutional review board from the principal investigator's institution.

The application deadline is November 1, 2004. Application guidelines are available from [www.hookerprograms.org](http://www.hookerprograms.org). ■

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