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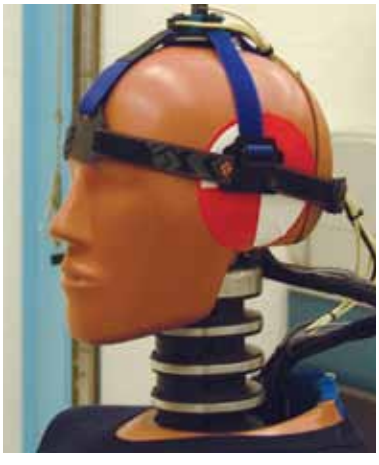

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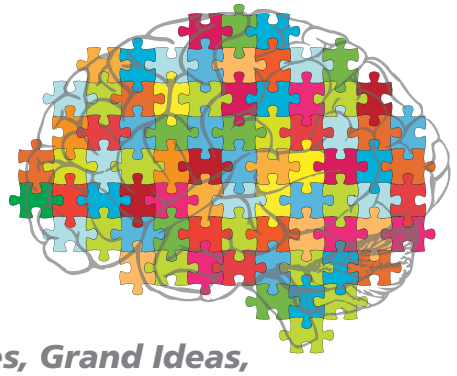

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Diversity Makes Better Science

Douglas L. Medin

Carol D. Lee

I'm honored to co-author this column with my colleague and friend Carol Lee. Among Carol's many honors is having been President of the American Educational Research Association (AERA). – DLM

It's not news that minorities are severely underrepresented in both science and science education. Efforts to increase diversity typically fall into two broad classes: some motivated by a concern for equity and social justice, and others motivated by a concern for increasing the pool of scientists that are prepared to address contemporary needs in science and technology. Our purpose in this column is to draw attention to another compelling rationale for increasing diversity in the sciences, a rationale that is intrinsic to the process of scientific inquiry and to the effectiveness of science education. We start from an expansive conception of science that includes not only the biological, physical, social, and psychological sciences, but also the practices within these disciplines, the ecological validity of their research programs, and the manner in which novices — especially K-12 students — learn these disciplines.

Our point is that attention to cultural membership and cultural practices is central to equity goals and national needs, but also equally important for the construction of knowledge and for the enterprise of science itself. Moreover, we cannot and do not shed our cultural practices at the door when we enter the domain of science, science education, or science learning.

Before defending this claim, we need to clarify that we do not subscribe to a "box model" of diversity in which gender or ethnicity are essentialized or reduced to a list of internal traits. Instead, we focus on the diversity of life practices, perspectives, values, and motivations that are often correlated with these groupings (Gutierrez & Rogoff, 2003).

Validity in the sciences involves much more than attending to canons about the need for proper controls, replicability, and the like. It involves choices about what problems to study, what populations to study, and what procedures and measures should be used. In making these choices, diverse perspectives and values are important. Consider the strong correlation between social-science researchers and the people they study. This predominantly White middle-class group of scientists focuses their research programs primarily on White, middle-class populations. This reliance on "convenience samples" (using undergraduates from introductory psychology courses is the paradigmatic example) does not stem from purposeful neglect of other potential samples. Nonetheless, it has disadvantageous consequences, including the fact that results based on this narrow slice of humankind may not, and often do not, generalize to other populations (Henrich et al., 2010).

Diverse perspectives and values also affect a researcher's choice of methods. Consider, for example, wildlife biologist Flo Gardipee, who studies population structure and gene flow in North American bison. Her First Nations perspective (she is Cherokee and Irish) led her to seek non-invasive methods for sampling buffalo DNA. She has pioneered the practice of using fecal samples for DNA collection (Gardipee et al., 2007). This method allows the widespread sampling of free-ranging bison populations with minimal human interference to their behavior and activities.

Diverse perspectives often are associated with diverse research foci and the generation of new findings. For example, when female scientists began to study primate social behavior, new insights into both female and male behaviors were uncovered (Hrdy, 1986).

In various fields of psychological science, minority scholars and culturally oriented majority scholars have expanded previously accepted conceptions of identity development, motivation, and

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Douglas L. Medin *is a professor at Northwestern University. He can be reached at medin@psychologicalscience.org.*

Carol D. Lee *is the Edwina S. Tarry Professor of Education and Social Policy at Northwestern University. Her research addresses cultural and ecological supports for teaching and learning. Her Cultural Modeling Framework addresses scaffolding forms of everyday knowledge to support disciplinary learning in schools. She can be contacted at cdlee@northwestern.edu.*

[1]Locus of control refers to a theory developed by Julian B. Rotter. Individuals with an internal locus of control believe that they are in control of their lives. In contrast, individuals with an external locus of control believes that their environment, a higher power, or other people control their life.

Do Great Results in the Lab Hold Up in the Field?

It was good news in 1999, when Craig A. Anderson and his colleagues compared laboratory and field research on 38 topics in 21 meta-analyses and found a lot of agreement between the results. Greg Mitchell, a social psychologist at the University of Virginia School of Law, wanted to know if these findings would hold up in a bigger sample. In a paper published in *Perspectives on Psychological Science*, Mitchell replicated the Anderson study with 217 lab-field comparisons from 82 meta-analyses, in such areas as industrial-organizational (I-O), social, consumer, and developmental psychology.

The results: "On one level, there is good news: a high degree of correspondence between findings observed in the lab and those found in the field," Mitchell says. "But if you look more closely, there are major variations. I-O led the pack by a long shot, social psychology did worse, and most other sub-disciplines fell somewhere in between."

If you extract the I-O stats from the batch, the overall correlation between lab and field results drops considerably. And in 30 of the 217 comparisons, the results in the field were the opposite of those in the lab. Of these reversals, the majority came from social psychology. Laboratory studies of gender differences fared particularly poorly when results were tested under more realistic conditions.

The lesson? "We need to be conducting more field studies," says Mitchell, and scientists should attempt to recreate as much of the field as possible in the lab, he says. "Because there's a nontrivial chance the lab will point us in the wrong direction."

Mitchell, G. (2012.) Revisiting truth or triviality: the external validity of research in the psychological laboratory. *Perspectives on Psychological Science*, 7(2), 109-117.

White House Appoints APS Fellow as Neuroscience Research Coordinator

Philip Rubin

In March, the White House Office of Science and Technology Policy (OSTP) announced that APS Fellow **Philip Rubin** was named as the first-ever White House coordinator on neuroscience research. In his role as Assistant Director for Social, Behavioral, and Economic Sciences in OSTP, Rubin has taken charge of a new national initiative to stimulate neuroscience research.

"With the bipartisan encouragement of Congress, and with the encouragement and support of many other stakeholders around the nation, neuroscience is being highlighted by this Administration and by OSTP as an area of significant importance," Rubin said at a recent meeting of the Institute of Medicine's Forum on Neuroscience in Washington, D.C.

Currently, Rubin is focusing on the role that the U.S. government will play in making the research initiative both sustainable and significant. Already, he and his team have begun the formal process of drafting a charter for a new interagency working group on neuroscience research funding that will be run by the National Science and Technology Council.

Rubin will also serve as a Senior Advisor in the Social, Behavioral, and Economic Sciences directorate at the National Science Foundation. Before his appointment, he was Chief Executive Officer at Haskins Laboratories and an adjunct professor in the Department of Surgery at the Yale University of Medicine, where he is best known for his research on articulatory synthesis. Rubin will be taking a break from his previous activities to dedicate himself to this initiative.

"We want to help identify, promote, and accelerate progress in those areas, ideas, and discoveries that show the greatest promise for making significant advances," he said.

The Perils of Trying to Unlearn

Some psychological scientists may be drawing bigger conclusions than they should from their data, say the authors of a new paper published in *Perspectives on Psychological Science*, a journal of the Association for Psychological Science. Studies that claim to reverse some learned response may not be reversing a life-long response, but are instead probably showing another kind of learning.

"It came about because I kept encountering a variety of studies with very different questions, areas, and fields of interest," says Marc Coutanche of the University of Pennsylvania, who cowrote the paper with past APS Board Member Sharon Thompson-Schill. "But one thing they had in common was that they were interested in some sort of association that people might learn over their lifetime."

In each study Coutanche describes in the new paper, the scientists tried to change that association. For example, researchers got familiar names to feel less familiar by changing how clearly they could be read.

Coutanche suspected that there might be something else going on when people seemed to have lost an association. Research on associations goes back to Pavlov's famous experiments in which he taught a dog to expect food at the sound of a bell; eventually, just the ringing bell was enough to get the dog to salivate. In more than a century of research since then, scientists have learned that getting a dog — or human — to forget an association once they've learned it is really hard. "If you're reversing a lifetime of training and influence in 45 minutes in the lab," says Coutanche, "that would be shocking. And in fact it's probably not the case."

"We know that if someone comes in and there's a striking and interesting change in their response, that shows us something has been learned," Coutanche says. "The key question is, what? What has been learned?" For the new paper, Coutanche delved into the field of associative learning to find some suggestions for what people are learning. For example, the fact that the subjects are encountering the situation in a lab instead of in the real world might set the stage for learning a new association. Or they might be learning to associate some other cue in the lab environment with a feeling.

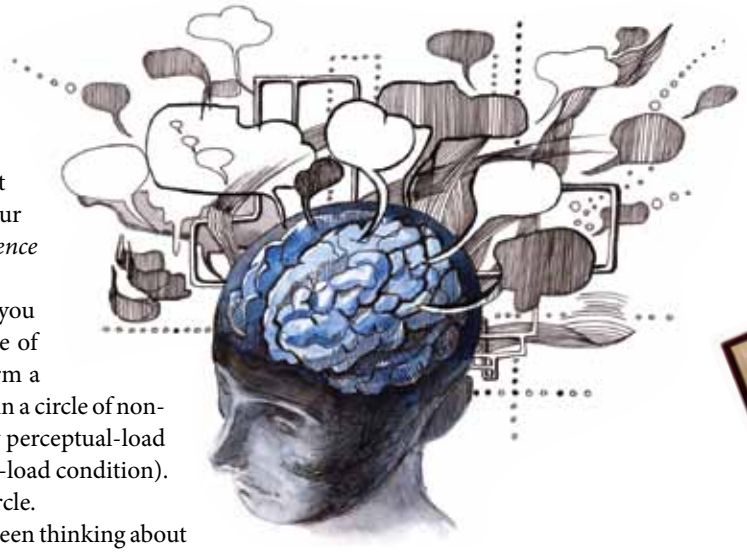
It may not always matter what people are learning if they're changing their reactions. In clinical practice, for example, the goal is often to give people new associations; when you're helping someone get over a phobia, for example, the precise mechanism is less important than the result. Whether they're changing an old association or learning a new one, as long as they don't turn to jelly in the presence of a spider, the therapy is a success. But for psychologists who are doing science, Coutanche says, "We need to be careful about drawing strong interpretations of these kind of studies."

Coutanche, M. N., & Thompson-Schill, S. L. (2012.) Reversal without remapping: what we can (and cannot) conclude about learned associations from training-induced behavior changes. *Perspectives on Psychological Science*, 7(2), 118-134.

Correction

In the April issue of the *Observer*, Greg Hajcak's name was mistakenly printed as Gregory Hajcak. We apologize for the error.

Daydreams and Working Memory



It's the end of the day, and you've read the beginning of that article for journal club three times, but whenever you get to the middle of the introduction, your thoughts keep turning to that experiment you're going to run in the morning. Whether we like it or not, our minds wander frequently, and, as a new study in *Psychological Science* shows, working memory is partially to blame.

Working memory is a sort of mental workspace that allows you to juggle multiple thoughts all at once. Researchers tested the role of working memory in mind wandering by having volunteers perform a visual-search task in which they had to find a target letter contained in a circle of non-target letters. In some trials, the non-target letters were all O's (low perceptual-load condition) and in others they were a mix of letters (high perceptual-load condition). A peripheral distracter was also shown to the left or right of the circle.

After completing the task, participants reported what they had been thinking about — either the task or something unrelated to the task — and were assessed for working memory. The researchers found that working memory was related to non-task thoughts only in the low perceptual-load condition.

"What this study seems to suggest is that, when circumstances for the task aren't very difficult, people who have additional working memory resources deploy them to think about things other than what they're doing," says Jonathan Smallwood of the Max Planck Institute, one of the study authors.

But people who have high working memory capacity aren't doomed to perpetual mind wandering. The research suggests people can control working memory like other mental resources. Of course, it might not feel like you have control when you're reading the first paragraph of that article — for the 10th time.

Levinson, D. B., Smallwood, J., & Davidson, R. J. (2012.) The persistence of thought: evidence for a role of working memory in the maintenance of task-unrelated thinking. Psychological Science, 23(4), 375-380.

Two Flavors of Relief

Whether you just miss getting struck by a car or click the Send button for the final revision of a journal article, the feeling you have is the same — it's relief. Yet even though this feeling is very common, scientists know relatively little about it. Attempting to deconstruct this sensation, Kate Sweeny at the University of California, Riverside, and Kathleen D. Vohs from the University of Minnesota, investigated how individuals experienced relief in different contexts.

In this *Psychological Science* study, adult volunteers were asked to recall an experience of personal relief. The participants who recalled a dodge-the-bullet type experience were more likely to fixate on how the outcome could have been worse, while individuals who recalled relief after finishing a task were more likely to focus on how the outcome might have been better.

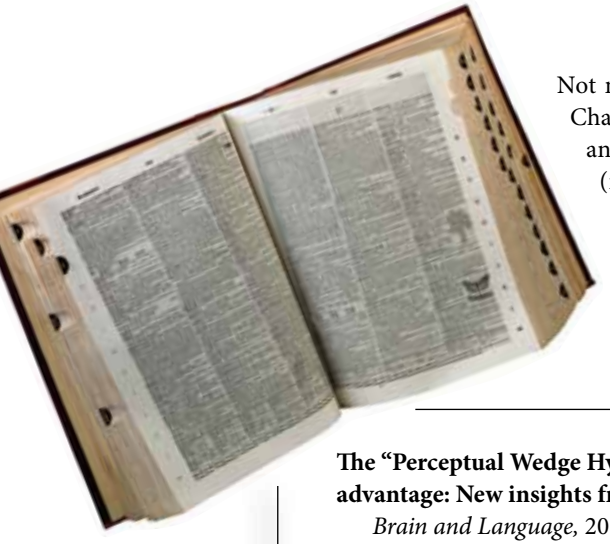
In a separate experiment, participants were told they would have to sing the song "Feelings" by Morris Albert in front of research staff. In some cases, the participants sang the song (task-completion condition), and in others they were told the microphone was broken so they wouldn't have to sing (near-miss condition). Participants in the near-miss condition were more likely to imagine what might have been and experience social isolation than were those in the task-completion condition, supporting the idea that relief can be identified in a laboratory setting.

No matter how you experience relief, the authors believe the positive sensation associated with it help people to push forward when they are facing difficult situations. But trying to remember that feeling when your data analysis spits out an insignificant *p* value can be hard.

Sweeny, K., & Vohs, K. D. On near misses and completed tasks: the nature of relief. Psychological Science. Advance online publication. doi: 10.1177/0956797611434590

Lexicon in the Laboratory

Reading Recommendations from Steven Pinker



Not many psychological scientists can list a dictionary on their CV. As Chair of the Usage Panel of the *American Heritage Dictionary*, APS Fellow and word guru, **Steven Pinker** leads a group of 200 language experts (including novelists, journalists, and even humorists) who weigh in on the appropriate use and construction for words used in American English. But instead of grammar tips, the Harvard psychological scientist has six articles to recommend for researchers who want to read up on the latest in language science.

The "Perceptual Wedge Hypothesis" as the basis for bilingual babies' phonetic processing advantage: New insights from fNIRS brain imaging

Brain and Language, 2011 by Laura-Ann Petitto, Melody S. Berens, Ioulia Kovelman, Matthew H. Dubins, Kaja Jasinska, and Mark H. Shalinsky

Researchers suggest that exposure to multiple languages creates a "perceptual wedge" that keeps children's door of language sensitivity open for longer periods of time.

When is *four* far more than *three*? Children's generalization of newly-acquired number words

Psychological Science, 2010 by Yi Ting Huang, Elizabeth Spelke, and Jesse Snedeker

Children may have more than one system to represent numbers in their minds, explaining why learning "one," "two" and "three" won't necessarily get them to "four," "five," and "six."

Perception, action and word meaning in the human brain: The case of action verbs

Annals of the New York Academy of Sciences, 2011 by Marina Bedny and Alfonso Caramazza

Understanding the meaning of action verbs — like "hopping"— doesn't rely on the same neural circuitry involved in processing sensory-motor experiences, say the authors of this review.

Parallels and nonparallels between language and music

Music Perception, 2009 by Ray Jackendoff

Music and language may share some of their underlying cognitive mechanisms, but they also differ significantly in others.

Molecular windows into speech and language disorders

Journal of Neurology, Neurosurgery, and Psychiatry, 2011 by Simon E. Fisher

The latest word on the famous FOXP2 gene, which has a unique sequence in humans, and which can cause a deficit in speech and language when it is mutated.

Rationales for indirect speech: The theory of the strategic speaker

Psychological Review, 2010 by James J. Lee and Steven Pinker

Innuendo, doublespeak, and other forms of shilly-shallying drive people nuts. But dancing around the point can sometimes be more useful than blurting out what you mean, according to the *strategic speaker theory*.

There's more on the psychological science of language:
• *Speaking Your Mind — Bilingual Language, Culture, and Emotion, Page 14*
• *The Science of Swearing, Page 21*

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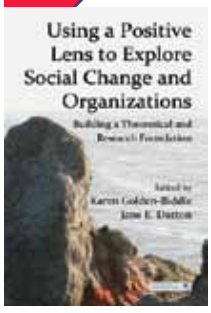

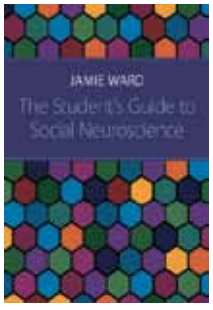

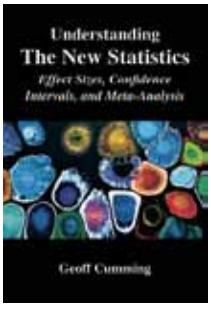

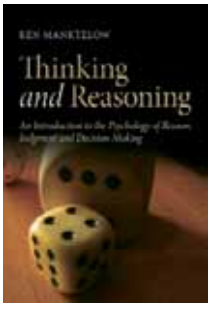

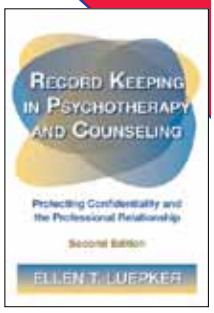

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Karen Golden-Biddle and Jane E. Dutton (Eds.)
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Jamie Ward
October 2011

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Basic Clinical Psychological Science? NSF Says "Yes!"

Following months of discussion with APS and Congress, the National Science Foundation (NSF) has changed the rules for its prestigious Graduate Research Fellowship Program (GRFP) to allow students from clinical psychology programs to apply. A number of clinical psychological science students have already been funded as a result.

NSF is the premier research funding agency for basic science in the United States. The 2011 GRFP announcement said that students from "clinical and counseling programs" were not eligible to apply. That started a series of letters, emails, and meetings between APS and NSF officials over what modern clinical psychological science means — specifically, that clinical science students can be engaged in basic research of the kind that NSF supports.

"To be sure, NSF is not in the business of training practitioners, nor of supporting applied research on clinical interventions," APS Executive Director Alan Kraut wrote to NSF's Deputy Director Cora Marrett, who was involved in previous discussions of the GRFP policy in her past NSF positions overseeing the agency's social and behavioral sciences directorate, as well as the science education directorate. "But," Kraut continued, "should students be declared ineligible simply because their graduate program happens to be clinical? That is an outdated view of clinical psychology programs. Many of these students will go on to research careers, some to careers in basic research. They come from psychological science programs that train students who would qualify for NSF funding in every way — they conduct basic research in emotion, cognition, language, etc. — except they are labeled 'clinical.' These students should be encouraged to apply for NSF training support, but as it stands now, they are precluded from even having their applications considered."

James Lightbourne

Congress also weighed in on the issue. The 2012 funding bill for NSF included language that Congress is "concerned that meritorious applications from psychology are being rejected without review solely because the applicant is enrolled in Clinical Psychology, even when his or her application and academic work is focused on areas of basic research within the NSF mission."

All this led to ongoing talks with NSF's Graduate Education Director James Lightbourne and a change in the wording of the 2012 announcement. Instead of clinical students being precluded, it was only "clinical study that is ineligible." The result was that clinical scientists were invited to be NSF reviewers, and many "basic" clinical psychology students applied and were funded.

"This was such a win-win for everyone involved," said Kraut. "NSF staff, at the level of Cora Marrett and Jim Lightbourne, were immediately sympathetic to the predicament — how to maintain NSF's focus on basic science but also to welcome clinical students who are training in basic research — and from the beginning looked for a solution."

"I can't say enough good things about the thoughtful and cooperative way NSF went through this deliberation," he said.

One other development that was used to support the case for changing NSF policy was the creation of the new APS journal, *Clinical Psychological Science*. Among its aims and scope is to publish "basic research on the psychological and related processes that are disrupted in psychopathology." "Here, we were able to point to the newest journal in the field targeting exactly the same area of basic clinical psychological science that we hoped NSF would," said Kraut. (See the March 2012 *Observer* for more on the new APS journal.)

The Challenges of Change

NSF's Lightbourne pointed to the need for the program to reflect changes in science, noting that the fluidity of scientific frontiers requires flexibility on the part of the agency. "The Graduate Research Fellowships, through supporting students in fields that are in NSF's mission, are key to the vitality and diversity of the US scientific workforce," he said. "But we know there are always changes in scientific disciplines. As knowledge advances and boundaries are blurred, new areas emerge. These changes make determining whether a student's field of study is eligible, or not, a persistent challenge."

"In this case, the challenge was to address the changing nature of basic psychological science. Our aim is to work with the scientific community to meet this kind of challenge while staying true to the mission of NSF," said Lightbourne. "After all, everyone benefits when budding, cutting-edge scientists are supported. Hopefully, the steps taken in this case will prove successful in doing that."

But even with everyone on the same side, making changes in a large funding program is no easy matter. From funding announcement to funding decision, the GRFP represents an

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enormous program, perhaps the largest fellowship program in all of science. Over 12,000 applicants from all scientific disciplines apply each year. Hundreds of experts come to Washington once each year to review the applications. Making any change in such a huge program is not easy.

Among those experts this year were several psychological scientists who helped usher in the new eligibility policy. They were uniformly positive about NSF's effort to ensure that the substance of the research, rather than the applicant's program, was the focus of the review.

"The GRFP leadership actually came to our panel and clarified the new procedures," said APS Fellow Timothy J. Strauman of Duke University, who is also past president of the Academy of Psychological Clinical Science, an organization of the nation's leading clinical science training programs. The message from the NSF officials was clear: "If a student in a clinical program was proposing research within the purview of NSF, then that application was indeed eligible and should be reviewed just the same as any other application."

Cindy M. Yee-Bradbury

According to Strauman, "that included studies of maladaptive behavior, as long as the population of interest was not simply an established psychiatric diagnostic category. So as an example, a student could propose research on problems in affect regulation, and even include a sample of individuals meeting criteria for some diagnostic category as part of the research, as long as that sample was not the only target of the research. Most of us felt that this was a very reasonable interpretation of the rules (since it also meant that students from non-clinical programs could do exactly the same thing), and my sense was that the reviewers did their best to apply the rules thoughtfully."

"My overall impression was that the process worked," said Strauman. "I don't know the outcomes, of course, in terms of actual fellowships awarded, but as far as the review went, I thought the reviewers worked hard to be fair."

What a Difference a Year Makes

This sentiment was echoed by Cindy M. Yee-Bradbury, of the University of California, Los Angeles, who was involved in the prior review cycle as well. "Tremendous gains were made over the past year," she said, when the old policy was still in effect and reviewers were required to flag an application for elimination if the student was from a clinical psychology program. "By 2012, we were asked instead to evaluate whether the focus of the proposed research was on basic or clinical phenomenon."

"This is not always an easy distinction to make," said Yee-Bradbury. "As one example, a proposed study might focus on psychiatric or neurological patients because their condition is associated with a specific neuroanatomical dysfunction, and the goal of the research is to understand the relevant brain processes rather than the condition per se. In some instances, the final decision came down to a judgment call that was made by an NSF program member."

Yee-Bradbury is delighted that "the superb opportunities offered through the NSF Graduate Research Fellowship Program are now available to current and future generations of clinical students."

The importance of the NSF fellowship award was echoed by APS Fellow Robert M. Arkin, a social psycholo-

Reversal of Fortune

Perhaps no argument made the case for changing NSF policy as clearly as what a heroic first-year graduate student had to suffer through last year. Lily Brown is in the clinical program at University of California, Los Angeles (UCLA), but her clinical status went undetected as her application made its way through the NSF review process in 2011. (To be clear, although the 2011 announcement did say that no student from a clinical program was eligible, another part of the announcement had enough ambiguity so that Lily was doing nothing improper in applying. In fact, this is how a few clinical students have received NSF funding from time to time over the past few years.) Lily's proposed research program was basic, NSF-relevant, and was reviewed as highly meritorious. She was awarded an NSF Fellowship.

Some weeks later, Lily was emailing an NSF official about a detail of her award, and the official noticed her email signature block said she was in the UCLA Clinical Program. The official pointed out that those in clinical programs are not eligible for the program. But unknown to NSF, Lily was at the same time also being admitted to the Learning and Behavior Program at UCLA. There was no change in her departmental requirements. It is just that, as often happens in cutting-edge clinical psychological science, a virtual dual PhD in Clinical and some other sub-discipline is required to address complicated research issues. Lily wrote back that she was a student in Clinical and a student in Learning and Memory. And APS wrote to NSF that Lily's status exemplified the exact reason clinical students should be allowed to apply.

"The same student," wrote APS Executive Director Alan Kraut, "whose application was funded by NSF at Time 1, was going to be unfunded by NSF at Time 2 based on her being in a clinical program (albeit one of the best clinical science programs in the country). Now we are at Time 3, and the student is technically now in an NSF-approved program [Learning and Memory], and so her funding will be left alone.

Same student, same application, same research program, same set of advisors, same training requirements. Ineligible if she continues to check the Clinical box, eligible if she checks the Learning and Behavior box."

The policy change was formally implemented in the 2012 GRFP announcement soon after.

gist from Ohio State University. "A number of our students at Ohio State have received NSF GRFPs," said Arkin. "It makes an incredible difference to students, freeing up their time to devote their entire energy to the research enterprise at a critical juncture in their career. The students who have received these fellowships are extraordinary scientists on the road to making significant contributions to psychological science."

Arkin also encourages senior scientists to volunteer as reviewers for the program. "It's not only exciting to work with colleagues to identify scholars who are going to make a difference in the future in psychological science but it's also inspiring to read some of the creative, sophisticated proposals from these applicants. I would encourage anyone to participate," he said, calling the experience "an intense, but exciting opportunity to make a difference in young scholars' lives."

In psychological science, when you say you have an NSF graduate research fellowship, it really means something. Now, thanks to the change at NSF, clinical science students can look forward to that kind of support too. ●

New Policy Eliminates Funding Hurdle for Promising Graduate Student

Edmarie Guzman-Velez

Edmarie Guzman-Velez studies emotions and memory in dementia, such as Alzheimer's disease specifically, looking at whether patients with dementia continue to experience emotions even when they don't remember the event that caused the emotion. During her second year in University of Iowa's clinical psychology training program, she submitted an application for an NSF Graduate Research Fellowship. After receiving an honorable mention for her application the previous year, Guzman-Velez and her advisor, Daniel Tranel, were almost certain she would receive the fellowship. Instead, Guzman-Velez received a notice of ineligibility. Because she was a student in the clinical psychology program, her application wouldn't even be reviewed. Guzman-Velez challenged that notice, and after the decision not to review was reversed, she received one of NSF's coveted fellowships.

What will the NSF Graduate Research Fellowship mean for your research, your career?

I applied for the NSF Graduate Research Fellowship because I want to devote most of my time to research. I am a teaching assistant at present, and although I enjoy teaching very much, it limits the time I can spend conducting research. This fellowship will allow me to continue working on my research projects, get involved in others, and work on manuscripts for publication. This is a great opportunity to conduct state-of-the-art research that will hopefully contribute to the field of neuropsychology. I also believe that this fellowship will help me continue to grow as a scientist, and it will also connect me with other people that have similar goals.

What work will your fellowship support?

Previous research done in our laboratory has shown that patients with bilateral focal hippocampal damage can sustain the experience of an emotion even when they cannot remember the event that caused the emotion. Because patients with Alzheimer's disease have similar neuroanatomical characteristics as patients with amnesia, we aim to explore whether patients with Alzheimer's disease can also sustain the experience of emotion despite their lack of memory for the event that caused the emotion. This approach is novel because although there are similarities between patients with amnesia and patients with Alzheimer's disease, they also differ in many ways. The most notable difference is that Alzheimer's disease is a neurodegenerative disease that affects the whole brain. We are also conducting structural MRI to explore the relationship between different brain structures as well as emotions and memory. This work will not only provide new information about the relationship between the brain and behavior, but it will potentially emphasize the importance of treating this population with much respect. Our actions can have a lasting effect on these patients even when their memory is impaired.

What was it like getting rejected and then being reconsidered?

It was somewhat disappointing, but I knew it was a very competitive fellowship. Therefore, I just tried to take the reviewers' comments into consideration and worked hard to improve my application. I was very nervous when I applied this time because I knew it was my last chance. Yet it all worked out! I was extremely excited when I heard the news. This is a great opportunity.

Final thoughts?

This experience really showed how important it is to persevere. I applied last year for the first time and worked for a whole year trying to improve my application. I'm also glad I decided to share my disagreement with their decision about my work not being eligible. It all paid off. There are also many people that have been very supportive throughout the whole process. My mentor, Daniel Tranel; members of my lab, Justin Feinstein and David Warren; Teresa Treat, Rachel Casas, and other faculty members; and student colleagues were all incredibly supportive throughout the whole process. I really think that NSF made a good decision. Great research is going to be supported by this fellowship.

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Speaking Your Mind

Bilingual Language, Culture, and Emotion

By Helen Fields

In much of the world, speaking multiple languages is the norm. Virtually everyone in the Netherlands and Norway speaks passable English, and it's possible to travel, or even get a doctorate, in many European countries without speaking the local language at all.

Despite widespread multilingualism, most research on the psychology of language has focused on monolingual English speakers. But in the last decade or so, psychological scientists have started studying people who speak multiple languages. This research has included how bilinguals' brains manage multiple languages, how they feel emotional words in their different languages, and whether their behavior and personality change when they speak different languages.

"Until recently, bilinguals were considered to be rather odd," says Judith Kroll, an APS Fellow at Pennsylvania State University. Bilinguals were studied as interesting oddities, like people who have had strokes or dyslexic children, but they weren't considered to be the normal case. Now, though, scientists have started to catch up. "The argument we've made is that bilinguals provide a lens for observing issues of interactions, plasticity, and change that we otherwise just wouldn't see," Kroll says.

Kroll and her collaborators study how bilinguals process language. "The bilingual is a mental juggler," she says. Rather than entirely turning off one language and turning on the other, people who speak two languages keep both languages active all the time. Particularly in reading and listening, there is evidence that both languages are active in the brain. In speaking, the bilingual has to take the reins, keeping track of which language they're speaking.

Bilinguals are also managing emotional content in two languages. Many say they feel things differently in each language.

And learning a new language also affects a person's relationship with their first language. Kroll and her colleagues did a study on American students who were learning Spanish in Salamanca, Spain. They found that those who were immersed in Spanish much of the time — not just in class — were less able to access English; they were apparently suppressing it so they could cope with a new language.

By measuring brain activity, Kroll has found that control areas of the brain are active when bilinguals are planning to speak in their second language. Many studies have found that people who speak multiple languages are very good at executive control, probably because of their constant practice at tamping down one language and keeping the other one flowing. A study by Ellen Bialystok of York University and colleagues found that bilinguals with Alzheimer's disease were diagnosed 4.3 years later, and they reported symptoms starting 5.1 years later than monolinguals. Another paper coauthored by Bialystok, which will appear in an upcoming issue of *Psychological Science,* suggests that poor immigrant children who speak both Portuguese and Luxembourgish have better control — selective attention and inhibitory suppression — than other children of similar socioeconomic status who only speak Portuguese.

Most of the studies on bilingualism and its beneficial effects on cognition have been correlational, Kroll says. The next step is to figure out "what it is about what bilinguals do with language that has these really remarkable consequences," she says.

While doing all this mental juggling, bilinguals are also managing emotional content in two languages. Many bilinguals say that they feel things differently in each language, says Catherine Caldwell-Harris at Boston University. She has studied how bilinguals experience emotion in their languages and also how their experiences change depending on when they learned the second language. In one study, Caldwell-Harris compared Spanish-English bilinguals who grew up in the United States with bilinguals who learned English later. Each person was presented with emotional expressions and neutral words, half in English and half in Spanish. While they read or heard the expressions, their skin conductance was measured, which can change in response to emotional stimuli. People responded to many emotional words similarly in their two languages. But childhood reprimands like "Shame on you!" or "Don't do that!" elicited a stronger response in Spanish for people who learned English late — who were yelled at mostly in Spanish as children — while, for people who learned English early, these reprimands produced the same response in English and Spanish.

While many researchers think the change in language learning with age is because of changes in the brain, Caldwell-Harris thinks there's more to it. Children who immigrate at different ages have very different social experiences. Young children have to use English to get by on the playground, while teenagers have more chances to seek out friends and socialize with other people who

speak their native language, and adults might only use the second language when they absolutely have to, such as in banks and stores. "Brain plasticity plays a role, but we've got to keep in mind a lot of other factors," she says.

The differences in how emotions feel in a bilingual individual's first and second languages have implications for marketing. Stefano Puntoni of the Rotterdam School of Management got interested in studying multilingualism in part because of his own experience. When he was getting his PhD in London, he noticed that people who were perfectly polite and proper in Italian swore like sailors when they spoke English — probably because the curse words didn't feel as emotional in a foreign language. To test emotionality in multiple languages, he found Dutch-French-English trilinguals in subway and train stations — trilinguals are pretty easy to come by in Brussels — and showed them a slogan in Dutch and French. (The study's instructions were in English.) Native speakers of both Dutch and French felt the slogan was more emotional in their first language than in their second language. "If the brand name is designed to communicate strong emotions, which in marketing we believe is really important, then doing that in the native language is much easier because it's easier to connect emotionally with people," Puntoni says.

The connection between language and emotion gets more complicated when you ask people how they feel. Puntoni has studied how people respond to surveys in different languages, and he found that when they're using their first language to answer a survey, they actually give lower ratings on emotion than when they do the same survey in another language.

When they're using their first language to answer a survey, people actually give lower ratings on emotion than when they do the same survey in another language.

In one study, Dutch university students who were proficient in English watched an animated short movie (the language-free Pixar film *Presto*, about a magician and his rabbit) in which the beginning and end were edited to remove any text. Then they rated the intensity of five positive and five negative emotions on a seven-point numerical scale. Some surveys had the emotion words in Dutch, and some had the emotion words in English. The participants gave more intense scores for English emotion words than Dutch emotion words. "What's happening is that people who are native speakers would tend to be more conservative — they would not endorse extreme labels," he says. Puntoni has shown this effect in different contexts. It might apply on a website in which people are asked to rate something on a scale from "I hate it" to "I love it." "You as an English native speaker might be reluctant to say that you hate something, but I'm not a native English speaker. I can hate a lot of things." When speaking Italian, Puntoni says, he would be much less likely to use the equivalent word for hate, *odio*.

When bilinguals read in their second language, they spontaneously activate the translation of the native language in their mind, says Guillaume Thierry at Bangor University in Wales. When Chinese speakers read in English, their brain activity shows that they are connecting the English words with their Chinese translations.

But Thierry's new research finds that this doesn't always happen; the emotional resonance of the words is important. For a study soon to be published in the *Journal of Neuroscience*, pairs of English words were presented to students from China who were proficient in English. Some of the words were neutral, some were unpleasant words like "violence," and some were associated with positive emotions. The Chinese translations of some of the word pairs sounded similar — a sort of prime that the participants didn't know about. Similar to earlier studies, the researchers could tell that the Chinese translations were activated when bilinguals read English words. But it only happened for positive and neutral words. "To our incredible surprise, what we found was that when the word was negative, the priming effect that was the connection between the two words disappears," Thierry says.

This means that the bilinguals' brains were apparently declining to translate the words into Chinese. "In other words, your brain makes very high-level decisions on what should come into the language system without consulting with your consciousness," Thierry says. It seems like the brain unconsciously protects bilinguals from feeling the negative words by stopping them from being translated into their native language.

Thierry's personal experience, like that of many bilinguals, has more to do with positive emotions. He is a French researcher living in Britain. "It never comes to my mind to say to my daughter, who is a five-year-old, 'I love you' in English," he says. "It would be completely without substance. I don't know how she would take it, because she's a native bilingual, which is different. But in my case English will remain, until I die, an alien language."

So the evidence suggests that many people, like Thierry, feel things differently in their two languages. Some research has also found that people behave differently depending on what language they're speaking.

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Most cross-cultural psychology research has looked at comparing groups — finding that people from Asian cultures tend to be more group-oriented and self-effacing, and people from Mexico tend to be more gregarious, for example.

Nairán Ramírez-Esparza at the University of Washington has done that kind of work, analyzing the language of people in Mexico and the United States to describe their personalities and what they value. She has also studied how these two cultures show up within one person, studying how Mexican-American bilinguals behave when they're speaking each of their two languages. For example, bilinguals were recorded on video responding to the same interview questions in Spanish and in English. Then reviewers watched the videos with the sound off and rated the speakers' personalities. Ramírez-Esparza knew from earlier research that people from Mexico put a high value on *simpatía* — the quality of being likeable, easygoing, fun to be with, polite, affectionate, and sharing feelings with others. Consistent with that value, the bilinguals in the videos seemed more agreeable when speaking Spanish than when speaking English — even though the sound was off.

Oddly though, bilinguals rated themselves lower on *simpatía* when they answered a questionnaire in Spanish compared to a questionnaire in English. Eventually, Ramírez-Esparza and her colleagues figured out the puzzle: Another aspect of *simpatía* is

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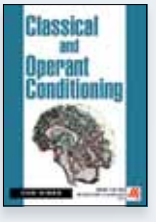

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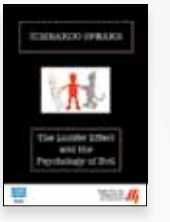

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modesty, and people didn't want to appear too self-aggrandizing by rating themselves as extremely *simpático*. "They are indeed switching personalities, in the sense that their cultural biases are influencing the way they respond to self-reports," she says.

This research highlights the fact that bilinguals are often also bicultural. In this case, language was what activated the switch between cultures. "Language is one of the main vehicles of culture," says Verónica Benet-Martínez of Pompeu Fabra University in Barcelona, who has collaborated with Ramírez-Esparza.

Some people have hypothesized that people with two cultures might act like a sort of average between the two cultures. But, instead, they seem to perform cultural frame-switching, operating in one culture or the other depending on the context. "Biculturals and bilinguals are like two people within one," Benet-Martínez says. For example, in one study, she and her colleagues showed Chinese-American biculturals an image of a fish swimming ahead of a group of fish. But first, each person was primed with either Chinese or American references. Even though the priming was all done in English, people who had been primed to think about Chinese culture were more likely to say the fish was out in front because he'd been kicked out by the group or because the group told him to go ahead and find food for them. People who had gotten the American prime said the fish was going ahead because it is his idead or he wanted to.

Different bicultural people find different ways to integrate their two sides, Benet-Martínez says. Some people feel that their two sides are in conflict, while others find a balance. In a meta-analysis about to be published in the *Journal of Cross-Cultural Psychology*, she and Angela Nguyen collected studies on people who are ethnic minorities or immigrants and found that those who embrace both the ethnic and host cultures have better mental health and social adjustment than either people who stick to the minority culture or those who assimilate completely, leaving their first culture behind. This body of research confirms that "success as an immigrant or ethnic minority is not contingent on abandoning your culture and only learning the host culture," she says. "People who have both are actually doing better, mentally."

Even people who don't identify as bicultural can pick up part of another culture by learning its language, Benet-Martínez says. "If you speak perfect Russian, you read Russian novels, you go to Russia sometimes, you watch Russian movies — before you know it, you are internalizing that culture and you are becoming bicultural." It's a matter of degrees, she says; you may not become as Russian as Vladimir Putin, but you will still have a bit of Russian in you.

Researchers still have a lot to learn about bilingual people — like how precisely knowing a second language improves the brain, or what happens when a third language is added. And bilinguals aren't interesting only by themselves, but also for what they show about how languages work in general. Future research with bilinguals may help answer questions about how languages are produced and perceived in the brain, and what the words people choose say about them. ●

Helen Fields *is a freelance writer from Washington, DC.*

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The Science of Swearing

By Timothy Jay and Kristin Janschewitz

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Why would a psychological scientist study swearing? Expertise in such an area has different practical significance inside and outside the community of psychological science. Outside the scientific community, expertise on taboo language is justification for frequent consultation about contemporary issues that are perennial: Is swearing harmful? Should children be allowed to swear? Is our swearing getting worse? One of us has been interviewed over 3,000 times by various media with respect to the questions above, as well as those about the use of taboo words in television, advertising, professional sports, radio, music, and film. In addition to consultation with mass media, expert testimony has been needed in cases involving sexual harassment, fighting words, picket-line speech, disturbing the peace, and contempt of court cases.

Considering the persistent need for an expert to consult for the above issues, it is odd that swearing expertise is weighted so differently when swearing is viewed from the perspective of psychological science. While hundreds of papers have been written about swearing since the early 1900s, they tend to originate from fields outside of psychology such as sociology, linguistics, and anthropology. When swearing is a part of psychological research, it is rarely an end in itself. It is far more common to see strong offensive words used as emotionally arousing stimuli — tools to study the effect of emotion on mental processes such as attention and memory.

Why the public-versus-science disconnect? Is swearing, as a behavior, outside the scope of what a psychological scientist ought to study? Because swearing is influenced so strongly by variables that can be quantified at the individual level, psychological scientists (more than linguists, anthropologists, and sociologists) have the best training to answer questions about it. Another explanation for the relative lack of emphasis on this topic is the orientation of psychological science to processes (e.g., memory) rather than life domains (e.g., leisure activities), a problem described by Paul Rozin. Arguably, a more domain-centered approach to psychological study would better accommodate topics such as swearing and other taboo behaviors.

Regardless of the reason for the relative lack of emphasis on swearing research *per se* inside psychological science, there is still a strong demand from outside the scientific community for explanations of swearing and associated phenomena. To give the reader a sense of the work that we do as psychological scientists who study swearing, let's consider some of the common questions we're asked about swearing.

Is swearing problematic or harmful?

Courts presume harm from speech in cases involving discrimination or sexual harassment. The original justification for our obscenity laws was predicated on an unfounded assumption that speech can deprave or corrupt children, but there is little (if any) social-science data demonstrating that a word in and of itself causes harm. A closely related problem is the manner in which harm has been defined — harm is most commonly framed in terms of standards and sensibilities such as religious values or sexual mores. Rarely are there attempts to quantify harm in terms of objectively measurable symptoms (e.g., sleep disorder, anxiety). Psychological scientists could certainly make a systematic effort to establish behavioral outcomes of swearing.

Swearing can occur with any emotion and yield positive or negative outcomes. Our work so far suggests that most uses of swear words are not problematic. We know this because we have recorded over 10,000 episodes of public swearing by children and adults, and rarely have we witnessed negative consequences. We have never seen public swearing lead to physical violence. Most public uses of taboo words are not in anger; they are innocuous or produce positive consequences (e.g., humor elicitation). No descriptive data are available about swearing in private settings, however, so more work needs to be done in that area.

Therefore, instead of thinking of swearing as uniformly harmful or morally wrong, more meaningful information about swearing can be obtained by asking what communication goals swearing

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Funding for Behavioral Research at NCI

By Rebecca A. Ferrer, Mary O'Connell, and Paige Green-McDonald

The Basic Biobehavioral and Psychological Sciences Branch (BBPSB) is housed within the Behavioral Research Program (BRP)[1] which has long been known as the home for psychological and behavioral sciences (www.psychologicalscience.org/r/observer/NCI) within the National Cancer Institute (NCI). While BRP also supports and conducts applied research, BBPSB largely funds basic psychological science. BBPSB's mission is to elucidate the nature of psychological phenomena that are associated with or predict cancer-related behaviors and outcomes, including mechanisms and processes that underlie these psychological phenomenon and interassociations among them.

BBPSB, formerly the Basic Biobehavioral Research Branch, recently revitalized its scientific priorities through a series of strategic planning efforts. These efforts have identified key research areas in biobehavioral mechanisms and psychological processes that are associated with cancer risk and outcome through input from leaders of organizations, such as the NCI-designated Comprehensive Cancer Centers, as well as scientific experts in various academic fields, including psychological science, behavioral oncology, and neuroscience. With a recharged research agenda and fresh perspective in basic psychological science, BBPSB is inviting basic scientists who examine the nature of psychological phenomena to explore new connections and research opportunities within the Branch.

BBPSB strives to expand the research portfolio in basic psychological science, including research on fundamental mechanisms, principles and theoretical underpinnings of psychological phenomena, such as attention, cognition, emotion/affect, judgment and decision making, motivation, perception, and sensation. The BBPSB research agenda also includes methodology and measurement of basic psychological, cognitive, and affective processes; biological mechanisms of psychosocial influences on cancer biology and outcomes; biobehavioral mechanisms of comorbidities associated with cancer and cancer treatment; and basic mechanisms of the placebo effect. To illustrate the range of scientific disciplines currently funded by BBPSB and highlight the breadth of work across the cancer continuum, featured grantee profiles are highlighted online (http://staffprofiles.cancer.gov/brp/granteeList.do).

One example that emphasizes the unique scientific mission of BBPSB is research on the phenomenological nature of emotion. BBPSB influences the compass of behavioral research traditionally funded by NCI with the introduction of basic psychological research questions such as the following:

- Is emotion a basic process with clear biological antecedents and consequences?
- Are there psychoneuroimmunological signatures associated with different affective experiences?
- What is the nature of the association between emotion and stress — are these distinct biological or experiential processes?

Such research questions offer important implications for basic science research in cancer control. Both stress and emotion have distinct connections with cancer-related behaviors and outcomes. For example, physiological responses to stress have been linked to tumor progression and metastasis; the experience of emotions, such as worry, has also been linked to a variety of cancer-relevant behaviors. Basic psychological research on the biological and experiential distinctions and similarities of emotion and stress may shed light on mechanisms and psychological underpinnings that are shared between the two sets of phenomena. This research could allow for a more precise understanding of the roles of affective phenomena in tumor progression, metastasis, and cancer-related behaviors. Additionally, creating a dialogue

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Paige Green-McDonald *is chief of the BBPSB branch at NCI. Under her leadership, BBPSB is cultivating a biobehavioral research portfolio with the aim of elucidating the biological mechanisms of psychosocial effects on health and disease. She can be contacted at mcdonalp@mail.nih.gov.*

Mary O'Connell *is a public health advisor at NCI. She manages communication activities and helps disseminate extramural funding opportunities and other information to scientists and the general public. She can be contacted at oconnellm@mail.nih.gov.*

[1]The BRP is dedicated to research on behavioral and psychosocial antecedents that predict or influence health outcomes in the context of cancer control. The fundamental goal of BRP, established within the NCI Division of Cancer Control and Population Sciences in 1997, is to increase the breadth, depth, and quality of behavioral research in cancer prevention and control.

between emotion and stress researchers, who face similar theoretical and methodological challenges, could advance both fields and further our understanding of the associations between these two phenomena and cancer-related outcomes.

Basic research that informs future efforts in cancer prevention and control is the cornerstone of the NCI mission.[2] Basic psychological science, particularly in areas that have easily identified practical relevance to important challenges in cancer prevention and control, capacitates practical applications. For example, research on perception of, and attention to, visual stimuli could provide a fundamental understanding of sensory and perceptual skills that are directly relevant to radiology and cancer detection. Research to identify neural signatures associated with cognitive decline or dysfunction could have future applications for the diagnosis and treatment of cognitive effects of cancer and cancer treatments. Research on the phenomenological nature of stress and emotion may later inform interventions to prevent cancer progression. All of these very practical advances will be possible only with scientific knowledge accrued in strategically crafted, basic psychological research.

NCI solicits research proposals for basic psychological and behavioral science through a variety of funding announcements. One such trans-NIH announcement, released as part of the Basic Behavioral and Social Science Research Opportunity Network (OppNet), solicits research projects on cognitive, affective, and developmental perspectives of decision making (http://grants.nih.gov/grants/guide/rfa-files/RFA-MH-12-130.html). Examples of research questions relevant to NCI and BBPSB priorities include, but are not limited to, the following:

- What are the reciprocal relationships between cognitive and affective processes in decision making?
- What are the neurobiological underpinnings of these interactions?
- What behavioral, computational, or neurobiological models capture the interactions of cognition and emotion in decision making?
- How do emotional factors influence reward processing, perceptual judgments, preference formation, and the calculation of economic value or subjective utility?

Innovative basic psychological research can respond to NCI's signature scientific program, the Provocative Questions Project. A question most recently featured in the program's request for applications, "Why don't more people alter behaviors known to increase the risk of cancer (http://grants.nih.gov/grants/guide/rfa-files/RFA-CA-11-011.html)?" begs for advances in our fundamental knowledge of the psychological mechanisms, principles, and theoretical underpinnings of behavior and behavior change.

Although the submission deadlines for these funding announcements have passed, there are many other announcements open to support basic biobehavioral and psychological science research. Program directors in BBPSB look forward to receiving applications for support for basic psychological research relevant to our mission. We enthusiastically provide scientific and programmatic support to researchers from the pre-application stage through successful funding and beyond. For more information about basic biobehavioral and psychological science research training[3] and collaboration opportunities at NCI, visit http://cancercontrol.cancer.gov/brp/bbpsb/index.html and contact BBPSB Chief Paige Green-McDonald; BBPSB Program Directors Wendy Nelson and Rebecca Ferrer; or BRP Associate Director William Klein.

BBPSB is also actively recruiting psychological scientists with expertise in perception, sensation, or attention to join the Branch research staff. Dynamic and experienced scientists are sought to develop funding initiatives, cultivate a diverse portfolio of grant-supported research, engage in collaborative research, publish in scientific outlets, and develop and manage scientific programming activities, such as symposia, workshops, and career training opportunities. ●

National Cancer Institute Resources for Psychological Scientists

Basic Biobehavioral and Psychological Sciences Branch
http://cancercontrol.cancer.gov/brp/bbpsb/about.html

OppNet
http://oppnet.nih.gov/index.asp

The Provocative Questions Project
http://provocativequestions.nci.nih.gov/

Contact BBPSP Program Directors
http://bit.ly/HFcAKx

Job Opportunities for Psychological Scientists at NCI
http://1.usa.gov/HQ9DcE

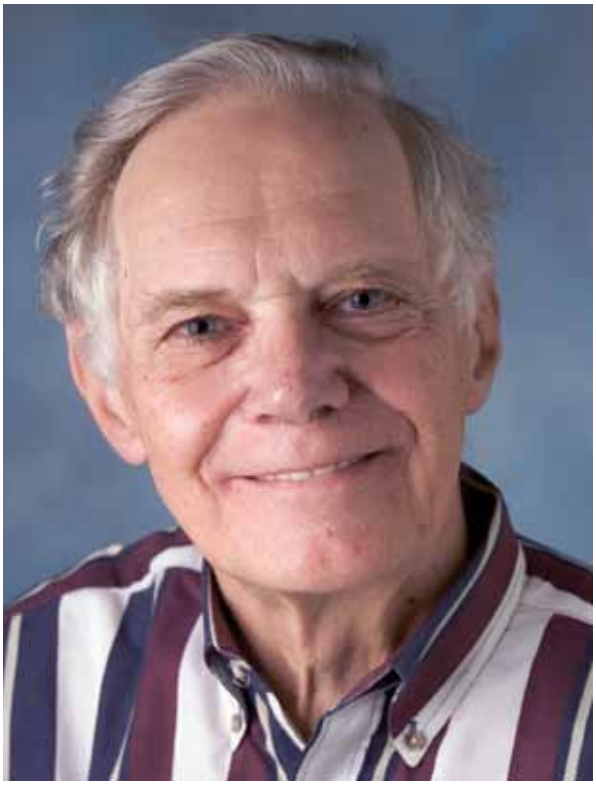
[2]NCI, one of the National Institutes of Health (NIH), coordinates the National Cancer Program, which conducts and supports research, training, health information dissemination, and other programs with respect to the cause, diagnosis, prevention, and treatment of cancer, rehabilitation from cancer, and the continuing care of cancer patients and the families of cancer patients. (Retrieved 1/12/2012 from http://www.cancer.gov/aboutnci/overview/mission.)

[3]Support for predoctoral and postdoctoral level training is now available at NCI. The predoctoral fellowship award, in particular, offers an exciting opportunity for students in biobehavioral and psychological sciences to fund education and dissertation research, as well as the opportunity for faculty members in this area to work with promising graduate students who may otherwise go unfunded. The postdoctoral award allows early-career scientists to fund their own postdoctoral program of research, facilitating increased independence, productiveness, and freedom in their area of science.

Remembering the Father of Cognitive Psychology

Ulric Neisser (1928-2012)

Ulric (Dick) Neisser was the "father of cognitive psychology" and an advocate for ecological approaches to cognitive research. Neisser was a brilliant synthesizer of diverse thoughts and findings. He was an elegant, clear, and persuasive writer. Neisser was also a relentlessly creative researcher, constantly striving to invent methods to explore important questions. Throughout his career, Neisser remained a champion of the underdog and an unrepentant revolutionary — his goal was to push psychology in the right direction. In addition, Dick was a lifelong baseball fan, a challenging mentor, and a good friend.



With the publication of *Cognitive Psychology* (1967), Neisser brought together research concerning perception, pattern recognition, attention, problem solving, and remembering. With his usual elegant prose, he emphasized both information processing and constructive processing. Neisser always described *Cognitive Psychology* as an assault on behaviorism. He was uncomfortable with behaviorism because he considered behaviorist assumptions wrong and because those assumptions limited what psychologists could study. In *Cognitive Psychology*, he did not explicitly attack behaviorism, but instead presented a compelling alternative. The book was immediately successful. Researchers working on problems throughout the field saw a unified theory that connected their research to this approach. Because Neisser first pulled these areas together, he was frequently referred to and introduced as the "father of cognitive psychology." As the champion of underdogs and revolutionary approaches, however, Neisser was uncomfortable in such a role.

In many ways, *Cognitive Psychology* was the culmination of Neisser's own academic journey to that point. Neisser gained an appreciation of information theory through his interactions with George Miller at Harvard and MIT. He pursued his first graduate degree at Swarthmore working with the Gestalt psychologists Wolfgang Kohler and Hans Wallach. He worked with Oliver Selfridge on the Pandemonium parallel processing model of computer pattern recognition and then demonstrated parallel-visual search in a series of creative experiments. While *Cognitive Psychology* can be viewed as the founding book for the field, it can also be seen as the work of an intellectually curious revolutionary bent on finding the correct way to understand human nature.

When Neisser moved to Cornell, he developed an appreciation of James J. and Eleanor J. Gibson's theory of direct perception — the idea that information in the optic array directly specifies the state of the world without the need for constructive processes during perception. Neisser had also become disenchanted with information-processing theories, reaction-time studies, and simplistic laboratory research. In response to his concerns, Neisser contributed to another intellectual revolution by becoming an advocate for ecological cognitive research. He argued that research should be designed to explore how people perceive, think, and remember in tasks and environments that reflect real world situations. In *Cognition and Reality*, Neisser integrated Gibsonian direct perception with constructive processes in cognition through his perceptual cycle: Information picked up through perception activates schemata, which in turn guides attention and action leading to the search for additional information.

Based on the perceptual cycle, Neisser and Robert Becklen created a series of experiments concerning selective looking (now called inattentional blindness). In these experiments, people watched superimposed videos of different events on a single screen. When they actively tracked one event, counting basketball passes by a set of players for example, they would miss surprising novel events, such as a woman with an umbrella walking through the scene. In describing the genesis of these studies, Neisser told me that he had been trying to find a visual method similar to dichotic listening studies when he was inspired by looking out a window at twilight. He realized he could see the world outside the window or he could selectively focus attention on the reflection of the room in the window. In other attention research, Neisser explored multitasking with Elizabeth Spelke and William Hirst. They found that people

can learn to perform two difficult tasks simultaneously without switching tasks or having one task become automatic.

During his keynote address at the first Practical Aspects of Memory Conference in 1978, Neisser applied an ecological approach to human memory research. He famously argued that "If X is an interesting or socially important aspect of memory, then psychologists have hardly ever studied X." In his own ecological memory research, Neisser corrected this limitation by studying point of view in autobiographical memory, errors in flashbulb memories, John Dean's Watergate memories, childhood amnesia, memory for the self, and the role of language in autobiographical memory. Neisser also edited *Memory Observed*, a volume dedicated to ecological memory research. In the late 1980s, ecological memory research in general, and Neisser's argument in particular, came under fire. I asked him if he had ever regretted his strongly worded assault on traditional laboratory memory research. He stated that he was right when he said it, and that the field had needed the push. Neisser was always proud that by championing the cause of ecological memory research, he helped open the field to a greater variety of research methods and questions.

In 1983, Neisser moved to Emory University, founded the Emory Cognition Project, and became an Atlanta Braves fan. He also continued to push for ecologically oriented research. The definition of the self was a problem domain that appealed to Neisser as needing both a perceptual and ecological analysis. In his 1988 paper, he stated that several types of information contribute to an individual's understanding of the self. Through his perceptual analysis, he argued that the self begins as the physical location directly perceived, much as objects and events are directly perceived. In Emory Cognition Project seminars, conferences, and edited volumes, Neisser led a resurgence in the cognitive study of the self.

Neisser also applied an ecological analysis to the domain of intelligence. He began by arguing that in addition to academic intelligence, psychological scientists should also study general intelligence as a skill in dealing with everyday life. Throughout his career, he was concerned with race differences in IQ testing. He edited a book on the issue in the 1980s and gave attention to this concern when he chaired the APA task force on IQ controversies in the 1990s.

During his career, Neisser was awarded a long list of honors, and he occasionally found himself in the center of broad movements. Neisser, however, always thought of himself as an outsider challenging psychology to move forward. He worked to create an alternative to behaviorism. He then tried to make sure that cognitive psychology was concerned with meaningful problems.

Neisser challenged not just the field of psychology, but also each individual with whom he worked. He remains my personal ideal for a graduate mentor. My discussions and arguments with Dick always led to more thoughtful research and better writing.

Ira Hyman and Ulric Neisser in 2011

I knew I was on a good track when he said "just so" and threw his tie over his shoulder. An argument with Dick meant the idea was worth worrying about. My best research, from false childhood memories to inattentional blindness for unicycling clowns, resulted from arguments with Dick or from trying to be more ecological than Neisser. When I last visited Dick, he again challenged me to justify my current line of research. Because we had a productive argument, I suspect that my current line of research will be a home run. Of course, we also watched an Atlanta Braves game. For those of us who knew and worked with Dick, we have lost the person who made us better scholars. Neisser was one of the last cognitive psychologists who was truly a general psychologist.

-Ira Hyman, *Western Washington University*

Ulric Neisser

A Lifetime of Achievements

1928 Neisser was born in Kiel, Germany.

1933 Moved to the United States for safety after Hitler and the Nazis came to power.

1952 Earned his master's degree at Swarthmore College, working with Wolfgang Kohler, Hans Wallach, and Henry Gleitman.

Karen E. Adolph

New York University

The late 1980s were heady times at Emory. Thanks to a gift from the Woodruff Foundation, the campus — including the staid Psychology Department — was a pandemonium of new construction. Dick, a Woodruff Professor, was part of the influx of impressive faculty wooed away from Ivy League schools. Dick's presence created a new feeling of intellectual excitement. Ideas first sparked in his Emory Cognition Project talks were widely disseminated as Cognition Project Reports, and several culminated in conferences that drew researchers from around the world. It was into this milieu that I arrived as a graduate student.

Several months before I met Dick, my boyfriend, traveling on business in Atlanta, popped unannounced into Dick's office to check him out as my potential graduate advisor. I was horrified. Nonetheless, I learned that Dick's books were organized by topic, his desktop was immaculate, his humor was ironic, and his personal style was fast-talking. My boyfriend approved. In fact, Dick turned out to be an amazing mentor. His only imperfection was that he loved to tell the story about getting vetted by the boyfriend of a prospective graduate student.

Ulric Neisser and Jackie Gibson

Dick was in England on sabbatical during my first year of graduate school. So he invited Jackie Gibson and Dave Lee to come to Emory to manage his students while he was away. I wanted to study infants' perception of affordances. However, with all the construction in the department, there was no space to set up a new apparatus. At Jackie's suggestion, we converted Dick's office into an infant locomotion lab with a climbing/sliding apparatus in the middle of the room and gym mats lining the floor and walls. To our surprise, all the babies climbed up, but few came down. After Dick returned from England, the operation was moved to a nearby Baptist church where there was space for adjustable sloping walkways and relief from construction jackhammers. Parents had to carry their infants up three flights of stairs past crucifixes and church suppers, but recruitment was not a problem. Research in the church lab yielded several interesting findings: Perceiving affordances required many weeks of locomotor experience, but learning did not transfer from crawling to walking.

Although this work was outside the scope of Dick's primary interests, he supported my efforts. The real challenge, Dick taught us, is to design ecologically valid, functionally relevant tasks that lead investigators to discover important questions. Furthermore, an integrated approach that examines behavior across traditionally disparate domains can lay the groundwork for general theories of learning and development.

Dick's support extended beyond the lab. He helped with totaled cars and moves, personal break-ups and hook-ups, job searches and career decisions. His students were frequent visitors in his home for rousing games of Pictionary and swimming in his pool. But Dick's real love was baseball. He invited his students on "research outings" to ballgames in which he and Dave Lee discussed optic flow and timing interceptive actions while those of us who did not know the Braves from the Falcons chewed sunflower seeds and listened raptly.

Dick was an eclectic thinker, and his work during the time I knew him included affordance perception, natural memory, development of the self, and perception-action links. He was also a beautiful writer and speaker, and he insisted that his students learn clear communication skills. One way that he operationalized good writing was the "eight-letter rule." He returned drafts of student writing with circles around all lengthy technical terms. Once, I asked Dick to fund the mailing of a parent newsletter. He agreed, but on one condition: I first had to pay him five cents for every word over eight letters long. I quickly revised the newsletter to make it more readable. Remembering him now with immense fondness and admiration, I'm embarrassed to report that despite judicious editing, this remembrance would have cost me $4.20.

1956 With Oliver Selfridge, published the Pandemonium parallel processing model of computer pattern recognition in *Science*.

1957 Joined the faculty at Brandeis University.

1960 Earned doctorate at Harvard, working with S. S. Stevens on auditory perception.

1964 Demonstrated parallel visual search in a paper published in *Scientific American*. Found that people could search for any one of 10 letters as quickly as they could search for a single letter.

1967 Published *Cognitive Psychology*.

1976 At Cornell, published *Cognition and Reality*, arguing for a perceptual cycle integrating direct perception with schemata and for an ecological approach to cognitive psychology.

1978 Gave the keynote address at the first Practical Aspects of Memory conference in which he argued for an ecological approach to real world memory problems.

Alan Baddeley

University of York

Like many people, my initial knowledge of Dick came through his classic text *Cognitive Psychology*. It provided a beautifully clear account of the exciting work of the 1960s in the newly developed information-processing paradigm, and indeed named the field. I first got to know Dick personally through the two Practical Aspects of Memory conferences in South Wales, by which time he had become disenchanted with the constrained way in which the field was developing. I remember the first meeting for Dick's plenary address which had the desired effect of stirring up the field of memory, and the second meeting for a very pleasant day we spent at the Worm's Head, which is not a pub. It's a beautiful beach and headland named after the Viking word for dragon (*wurm*).

My second memory is less restful. I was invited in 1986 to a memory symposium at Williams College in Massachusetts. Speakers were to stay at a rather grand house, built as a "cottage," I believe, by the Rockefellers. The downside was that there were more speakers than rooms, so some of us would have to share. In the hope of bagging one of the single rooms, I explained that I am a notorious snorer. The bad news was that I had to share, but the good news was that it was with Dick, which turned into bad news when I discovered he was a league above me in the snoring stakes. Given the combination of jet lag and sleep deprivation, I almost fell asleep during my own talk the following morning.

Finally, I'd like to share a story about Dick as the perfect host. I was invited to Cornell, where I was splendidly looked after, wined, and dined. I had a memorable morning with Jimmy and Jackie Gibson, and in the evening I was taken to a great folk session given by two graduate students. I still listen to their vinyl record, and I gather they still sing. Next morning, Dick was due to pick me up and take me to the airport. Time passed, and I was becoming increasingly anxious when Dick arrived, breathlessly explaining he had been stopped for speeding. How on earth were we going to make the plane? "Don't worry," he said. "I will go the back way. There won't be any cops there." He whizzed through the back streets of Ithaca like a driver in the Monte Carlo rally and arrived at the airport just as they were about to wheel away the stairs from the plane. I made it and, thoroughly hyped by all this, as we began to taxi, I leapt to my feet and rushed to the window and waved, only to be grabbed by an alarmed stewardess and thrust back in my seat.

Dick was a one-off, a thoughtful iconoclast, a wonderful communicator, and a good friend.

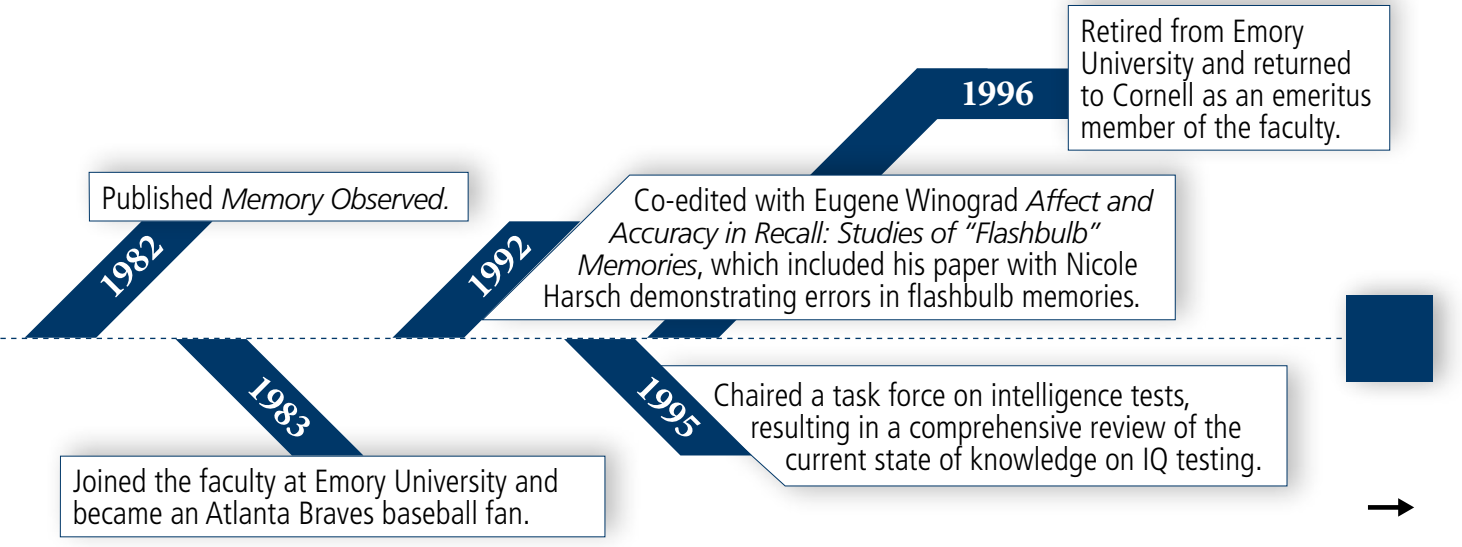
William F. Brewer

University of Illinois at Urbana-Champaign

I have many wonderful memories of Dick Neisser. During the 1980s and early 1990s, Dick adopted me into the Emory family. When there was something going on at Emory that Dick thought I might find interesting, he would call me and say, "Why don't you come on down?" So I frequently flew to Atlanta into the warm atmosphere of the Emory Cognition Project.

In 1981, Dick was invited to Urbana to give a major talk for a nonspecialized audience. He used the occasion to make powerful criticisms of some of the large intellectual currents in the history of psychology. He ravaged behaviorism, psychoanalysis, and information-processing psychology. As I walked out of the lecture hall, a well-known physicist came up to me and said that he didn't know much about psychology, but he had enjoyed seeing such a fine mind at work. I said to him, "What you don't realize is that this man is one of the founders of information-processing psychology." The physicist's jaw literally dropped.

A few years later, David Rubin was having trouble getting Dick and me to submit our chapters for David's 1986 book, *Autobiographical Memory*. To put the pressure on us, he had told each of us that we were single-handedly holding up the book. After many months, I finally caved and sent my chapter off to David (who flew down to Emory and bothered Dick until he completed his chapter). When we found out about David's little white lie, Dick made fun of me for giving in first. Within a few months, Dick called me up to invite me to write a chapter for what turned into *Remembering Reconsidered*. Given recent events, I asked him if he really knew what he was doing. He said he certainly did. He knew how to play many roles, and he planned on being a tough editor. He was, though I think my chapter was the last one turned in.



Dick had a finely tuned ability to spot important ideas. In the summer of 1988, Dick invited Geoff Hinton down to Emory to give a week-long workshop on connectionism. There were intellectual fireworks. Dick was impressed with the natural way that connectionism could deal with multiple constraint satisfaction. However, the last lines of my notes from the workshop capture his reflection that these were deep and creative ideas, but why didn't they fire him up to go out and do a new experiment?

Dick was not physically present for one of my favorite memories of him. Sometime in the late 1970s, I first read his important paper *Memory: What are the important questions?* He was reveling in his role as iconoclast and taking memory research from the Ebbinghaus Empire to the woodshed. He was having such a good time that I began laughing out loud — so loud that Ed Lichtenstein, who had an office across the hall, stuck his head in my office door and asked what was going on.

The memories live on.

Stephen J. Ceci

Cornell University

Dick Neisser was an icon in psychology. Because his contributions are well known, I want to focus on the impact he had on his colleagues.

As a new assistant professor, I prepared a grant with a $20,000 budget cap. I asked Dick to read it. Later, he returned it with a surprising change: He added two zeros to the budget — increasing it from $20,000 to $2 million! He said that it was no more difficult getting large grants funded than small ones, and I should request funding for many of the ideas I discussed but did not propose tackling. This was quintessential Dick: He always pushed his colleagues to aim higher and to set more ambitious goals. I ended up submitting the grant with a budget that was one order of magnitude higher than the original. I was awarded that grant, and to this day I thank Dick for urging me to aim higher, and to take intellectual risks. This advice was repeated two years later when I applied for a Research Career Development grant. Again, Dick urged me to take intellectual chances, and be more openly argumentative in my theoretical claims. I cannot prove that getting that award was the result of Dick's encouragement, but I have always believed it was.

Dick was not only a wise and generous mentor, but he could be very strategic. I was about to resubmit a paper I co-authored with Urie Bronfenbrenner. Urie was an overwhelming intellect. But because of our age and status differences, I usually deferred to him. In our paper, we reported a pair of experiments on children's temporal calibration during both female (cupcake baking) and male (motorcycle battery charging) sex-typed the tasks. Urie felt that the methodological and statistical details in the draft got in the way of the reader, so he deleted all of it. Yes, all of it! In its place, he inserted lots of wonderful narrative devices (e.g., replacing the RESULTS header with "Brave new world: Beyond the home and lab"), but he removed the stats, except for a footnote. When we received reviews from *Child Development*, the reviewers of course bemoaned the missing statistics and methodological details. Long story short, I revised the paper, re-inserting these details, and when I gave it back to Urie, he once again excised them. It was then that the long reach of Dick appeared. When I sent him this revision, he sent me a pissy note saying that it was a "pretentious little cookie experiment" that made bloated claims. I was quite dejected. Although I knew the writing needed work, I thought the findings were important. Some days later, a colleague asked me for a copy of the "cookie" paper, explaining that Dick raved about it to him! He said Dick told him that he sent me a pissy note because he assumed that I needed ammunition to get Urie to allow me to rewrite it. He was right. When I shared his note with Urie, he agreed to reformat the paper in traditional experimental format, just as Dick planned.

During the 32 years I knew Dick, I sat on committees with him, published with him, and occasionally socialized with him. He never stopped amazing me. He had a perspective that was all his own. I once told him that I found myself aping his analytic sleights of hand. He smiled, and said that editors and reviewers were "on" to his tricks. Tricks indeed!

James Cutting

Cornell University

I arrived in Ithaca in 1980, and Dick Neisser still felt the sting of generally negative reception to his second book, *Cognition and Reality* (1976). He ran a weekly faculty and graduate seminar — Cognitive Lunch — which I later inherited, transformed a bit, and have now run for more than 25 years. Under Dick, the seminar ran across a broad number of topics. He was casting about for his next underappreciated venue, having "dabbled" in selective looking, divided attention, gaps in Black/White school achievement, and John Dean's memory. In those seminars, it was never in doubt who was the smartest person in the room. The rest of us spoke — and we did feel compelled to speak — with some trepidation, fully assured that whatever we might have said could be easily and witheringly countered. It was a disheartening but awe-inspiring experience. And then Dick left, suddenly, for Emory.

Intellectual life at Cornell then gained some lackluster normality. When Dick returned 15 years later, he was a different man. Intellectually, he hadn't lost a step, but he was now affable, gregarious, and playful in ways that were unrecognizable from before. I thank Emory and its people for his transformation, because it was then that Dick became a close friend.

It wasn't just psychological science that brought us close; it was life's unexpected events. Suddenly, my first wife was dying from multiple sclerosis, and Dick's wife Arden became her closest friend. Arden, no less forthright than Dick, refused to talk comforts and pleasantries. My wife was enchanted. She died, and then suddenly so did Arden. Dick and I were bereft. We had dinners together every two weeks at an Indian restaurant, bathing despair in the hottest food we could find as if to test whether we were still alive. Over these meals, Dick and I searched for meaning, found solace in small day-to-day regularities, and spoke to each other with a depth of feeling and understanding that I could never replicate. We also laughed a lot, and it was the laughter that brought us through those dark times. Along with being one of the most important psychologists of our time, Dick was a consummate raconteur and a good man.

Robyn Fivush

Emory University

I remember the day I met Dick Neisser. I came to Emory for a job interview as a young, naïve psychologist studying memory development, in awe of the man who wrote the book that defined the way I thought about memory. I was both excited and terrified. That first day I met with multiple people and had a number of stimulating conversations. I hoped these wonderful people would become my colleagues. At the end of the day, I gave my job talk, focusing on my research at the time on the development of generalized event representations (scripts), and, exhausted, was going back to the hotel before dinner. But Dick grabbed me in the hall before I could leave and escorted me into his office. With his hair typically askew and his tie tossed over his shoulder, he challenged me, "Scripts? What exactly are scripts and where are they in the head?" I answered as best I could, and Dick followed up with question after question. For an hour, I felt like I was on a merry-go-round, exhilarated but dizzy at the level of intellectual engagement he demanded. I left his office dazed, with more ideas than I could get a handle on buzzing in my head. But I guess I did all right, because I got the job.

Over the years, Dick became my mentor, my colleague, and my friend. He never stopped being the most demanding intellectual partner I have ever encountered, yet he was incredibly supportive, both professionally and personally. Dick founded the Emory Cognition Project at Emory, and, over the years we overlapped (1984-1996), I was fortunate to be part of the amazing intellectual climate he created through seminars and symposia on topics ranging from concepts and memory to self-understanding. The semester-long seminars were attended by faculty and graduate students who would debate current controversies, and each one culminated in a conference attended by acclaimed scholars in the field. These seminars and conferences fundamentally changed my thinking about the forms and functions of autobiographical memory. Of course, as I learned from Dick, this is *my* memory (or my *memory*), and it may or may not be accurate in the details. But the meaning is right, because memory is about being in the world and connecting with others.

My memories of Dick Neisser remain among the most meaningful memories I have, and they form the basis of who I am as a scholar and as a person. Dick's intellectual flame will never be extinguished. His legacy will live on as an inspiration to the field he named and shaped, and I was lucky to be one of the many people whose lives he touched. I will always remember Dick Neisser.

William Hirst

The New School

Three things come to mind when I think of Dick. First, there was his intellectual honesty. It allowed him to take stock of his early work and make a sharp turn midway through his career. Early in his career, he occupied the frontline of a successful battle to reject the view that psychological science should be narrowly focused on stimulus-response contingencies. Along with others, he saw the task facing psychologists, especially new cognitive psychologists, as centered on the study of mental life, especially the mental processes mediating stimulus and response. As Dick stated in his classic book *Cognitive Psychology*, psychological scientists needed to trace the flow of information from the point stimuli impinged upon the sensorium to the point at which behavior emerged.

Midcareer, however, Dick examined the progress being made in the field he helped establish, and found it wanting. Influenced by his close relationship with the Gibsons, Dick worried that cognitive psychology was becoming detached from reality, from the very phenomenon he hoped it would study. In *Cognition and Reality*, he suggested that cognitive psychologists redirect their interests and attend more closely to the world in which cognition occurs. His dramatic speech to the *First International Conference on Practical Aspects of Memory* reflected this concern and cast a rather dismal view on research efforts at that time.

Being at Cornell when Dick was making his transition from "hard-core," "mainstream" cognitive psychologist to a rebel without a cause was an exciting experience that had a huge impact on my thinking. Several years ago, over drinks with a colleague, I railed against the epidemic and intransigent influence of Ebbinghaus on memory research. My colleague shot back with what she thought was a just rejoinder, accusing me of being a "Son of Neisser." I could not have been more complimented, for, at least to me, Dick was right in wanting to study cognition in a way that embraces the world rather than tries to control its complexity.

Dick was able to convince so many to study the mind in a new way, not once, but twice, because — and here is my second thought about Dick — he had a remarkable ability to articulate his positions with astute clarity. I have always felt that Dick was initially interested in computer simulation because his mind was so, well, computer-like. He stated his ideas carefully and precisely, tightly and logically, presenting his positions in a manner that compelled others to take notice.

And finally, as any "Son of Neisser" knows, the computer analogy has its limitations, especially when applied to someone like Dick. The strength of Dick's arguments rested not only on their clarity, but also on the humanity in Dick's language and his thinking. He never wandered far from his subject of study — the engaged person striving for an "effort after meaning." He wanted to infuse everything he wrote about with a respect for man's humanity. This desire led Dick to tackle topics the earliest cognitive psychologists eschewed — for instance, the self. It also led to him to consider such politically charged topics as the relation between race and intelligence, and the nature of recovered memories.

As I think back on Dick's influence on me, and on the field of psychological science, I am awed by Dick's ability to face complex issues square on and with remarkable integrity, articulateness, rigor, and passion. Dick's rare combination of talent and caring, in his work and as a colleague and friend, will be deeply missed. It is not to be taken for granted when an intellectual discipline can boast of such a strong, authentic, and needed voice.

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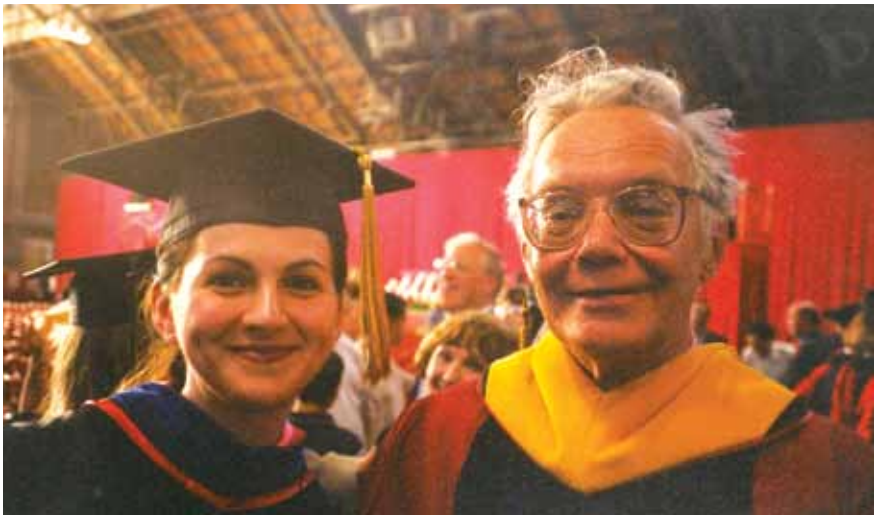
Viorica Marian

Northwestern University

I was 18 and living in Alaska when I had my first interaction with Ulric Neisser. I had just read an article of his, and it made such an impression on me that I called him up. (This was before the ubiquity of e-mail and the Internet). I didn't know who he was. In fact, I called him because I assumed that, because he was the second author, he was the student or research assistant, and the first author was the professor. The reverse turned out to be true — a characteristic feature of Dick's intellectual generosity to his students. We had the most wonderful phone conversation. A year later, while taking a course on History and Theories of Psychology, I turned the page in the textbook and there it was, a large picture of Ulric Neisser. He was described as the father of cognitive psychology, and there was a significant section devoted to his 1967 book and the cognitive revolution. Just imagine my shock. Not long after, I became Dick's last PhD student, first at Emory and then at Cornell.



Neisser with Viorica Marian at Cornell University in 2000

At Emory during that period, Dick was particularly interested in the self and in intelligence. He edited a book series on the self and headed an APA task force on IQ and its determinants. In 1996, Dick moved to Cornell, and so did I. The Psychology Department at Cornell was a place of great synergy among faculty and students. I still find Dick's notes and comments on various pages when I look through my files. I learned many things from him — he influenced my research, the way I think, the way I write, and the decisions I make in how to run a lab. I take my PhD students to lunch to celebrate a special occasion the way he did.

I have many fond memories of Dick. One of my favorites is canoeing with him on Cayuga Lake during a visit to their house. He had just bought a new canoe and was happy to take it on the water. I remember him rowing, relaxed and smiling, on a beautiful sunny day. Dick was a brilliant man, of course. But he was also funny, witty, direct, quick, and curious about many things. He was a force of nature. A conversation with him left your views expanded in both breadth and depth. He is the most towering figure in my life, academically and intellectually above all, but also in personal milestones — he was there at my graduation, made a toast at my wedding, and celebrated my first faculty position. I graduated when Dick was 72 and saw him four times after — twice on my visits to Ithaca, once at a conference, and once when he and Sandy Condry visited me in Evanston. He was already ill then, but the medication was successfully controlling his symptoms.

I am enormously grateful to have had Dick as advisor and mentor. I hope he knew how much he meant to me. I remember Dick talking about his own advisors and contemporaries — S.S. Stevens, George Miller, J.J. and Eleanor Gibson. So what I will do is take my graduate students out for drinks and tell them about Dick. I will miss him.

David C. Rubin

Duke University

Dick Neisser had a profound influence on me personally and on my career. I was never his student, but like many of my generation, I became part of a new field that was defined by his 1967 book *Cognitive Psychology*. I read and reread it, and took graduate courses in which it was the text. It was the perfect mix of empirical support, computer models, and broad ideas. Then, for decades, I taught an undergraduate course with a host of textbooks that used his terms and concepts and followed his outline chapter by chapter. Only recently, when I read his autobiographical chapter, did I understand how his personal intellectual history shaped the field.

My work always involved attempting rigorous scientific behavioral and neural-based studies in order to understand real world phenomena: memory for prose, oral traditions, autobiographical memory, and posttraumatic stress disorder. I benefitted when, "pulling" by example and "pushing" by theoretical argument, Dick tried to extend the theoretical questions of his laboratory-based field to broader observations and phenomena than the laboratory allowed. All of a sudden, I was no longer wandering in the woods alone trying to explain myself to colleagues and defend myself from reviewers; I was part of a new movement that was changing what journals would publish. Without Dick and others, many of whom were involved in biannual meetings and edited volumes for the Emory Cognition Project, and in his edited collection, *Memory Observed*, it would have been a harder and less productive journey.

More personally, Dick was both one of my greatest supporters and harshest critics. Affection did not stand in the way of intellectual attack and did not interfere with it for Dick. When he asked me to be a discussant on his presentation for an edited Emory Cognition book, he told me to "go for the kill." I did, using a Gibsonian argument he favored against him. I started the discussion by saying that Dick was incompetent to make his points. Ira Hyman reported that graduate students in the back of the audience gasped. Only later at the end of the talk did I explain that we were all incompetent given Gibson's view of our

evolutionary history. Dick enjoyed it, and especially the part in which I turned his own ideas against his thesis. He asked for a written version to be included as a chapter. The other editor of the volume, Gene Winograd, strongly suggested that my comment may have been reasonable in its oral context, but needed to be removed from the written chapter I had submitted. I am not sure Dick would have agreed with the edit. But if he were alive, he might try to find tapes of the conference to show my memory was just as wrong and self-promoting as John Dean's.

Dick was also one of the smartest, open, most helpful, and warmest people I have known. I am thankful I had the interactions I had. He will be missed more than he would have allowed himself to believe.

Daniel J. Simons

University of Illinois at Urbana-Champaign

It seems that every new line of research I develop can trace its roots, at least in part, to something Ulric Neisser touched first. He was one of my intellectual idols. His innovative and original work on selective looking in the 1970s inspired my later studies of inattentional blindness, and his incisive questioning and strong predictions helped motivate the real-world change blindness studies Dan Levin and I did in the mid-1990s.

I first met Dick when I was an undergraduate. He came to speak at a nearby college, and our cognitive psychology class took a field trip to hear him. Although I don't think I realized it at the time, that talk triggered my interest in ecological approaches to cognition. I went home and read *Cognition and Reality*, one of the great books in our field, and one that I return to regularly — I advise all my students to read it.

I next encountered Dick at the Psychonomic Society meeting during my first year of graduate school. I found myself attending all of the same sessions he did, which to me was a sign that I was in the "right" sessions. There I witnessed his ability to take apart a muddled idea with a series of challenging questions, an ability I had to confront myself a few years later when Dick moved back to Cornell. Over the final year or so of my graduate career, I had the privilege to get to know Dick personally and to experience his incisive intellect firsthand. When Dick just told you that your idea was "interesting," you could be sure it wasn't. You knew you had said something worthwhile only when he argued with you.

One of the traits I liked most about Dick was his ability to make strong, theoretically motivated, testable predictions without taking it personally on those rare occasions when the data proved him wrong. Before Dick arrived at Cornell, Dan Levin and I had been studying change blindness, the failure to notice large changes to scenes. Our work had used photographs and movies, but when Dick arrived and saw our results, he questioned their ecological validity. He argued that videos were a mediated, passive experience rather than a direct one, and he predicted that change blindness wouldn't happen to the same extent in the real world. One of my proudest accomplishments came when Dan and I were able to prove him wrong!

My own research and thinking were indelibly affected by Neisser and his work, and I will miss him as an intellectual inspiration, a colleague, and a friend. I take comfort in knowing that my own work derives from the ideas of an intellectual giant.

Eugene Winograd

Emory College

Dick and I had adjacent offices at Emory. I have three flashbulb memories of him coming into my office with big news. The first time was in the summer of 1991. Dick said we had to buy season tickets for the Braves. There was a special deal: If we bought season tickets for the next year, we would get first choice for post-season tickets for this year. At first I refused, but Dick was persuasive. We found two other faculty fans and never looked back. Our ticket syndicate lasted for 17 years, even when Dick returned to Ithaca.

My second flashbulb memory is about the San Francisco, or Loma Prieta, earthquake. You may recall hearing the news while trying to watch a World Series game that was being played in San Francisco and finding out that there had been an earthquake. Because my daughter was on vacation in San Francisco at the time, I was concerned about her welfare and never thought about flashbulb memories. But when I got to my office the next morning, Dick was waiting for me, obviously excited. "We've got to get to work right away, Gene," he said. In 24 hours, we had the questionnaires ready, lined up two large sections of Psychology 101 as informants, and got in touch with colleagues at Berkeley and Santa Cruz. There, we were able to recruit informants who, most importantly, had experienced the earthquake directly. And away we went, searching for new flashbulb memories. While Dick's earlier flashbulb-memory research had shown surprising amounts of forgetting, the California informants who directly experienced the earthquake showed little forgetting after a year.

My third flashbulb memory involving Dick is less happy. He came into my office to tell me that he was leaving Emory and returning to Ithaca. It was what Arden wanted, he said, and he had no serious objections. I couldn't talk him out of it.

The thirteen years Dick spent as a Woodruff professor at Emory were exciting ones for everyone interested in cognitive psychology. Dick organized lots of conferences, almost all of which ended up as books. And there were always interesting visitors around, either for conferences or just to spend time with Dick. Eleanor Gibson was a frequent visitor. It was a stimulating time, especially for graduate students. Woodruff professors were not required to teach at all, but Dick wanted to. He regularly taught an undergraduate course on intelligence as well as graduate seminars. Woodruff chairs also didn't have to take part in departmental affairs, but Dick was an active departmental citizen. He regularly fell asleep at departmental meetings as well as during talks. Yet he had an uncanny knack of opening his eyes at unpredictable intervals, trapping the unwary with his penetrating observation.

What most impressed me about Dick when I got to know him, aside from his brilliant intellect, was his boundless energy. Lean and trim, he had a spring in his step and was eternally youthful. I especially admired the fact that, as far as anyone could tell, he never exercised. He was an excellent colleague, teacher, and friend, and an unstinting mentor to graduate students and junior faculty. His contribution to Emory was enormous and lives on. We still miss him. ●

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The 2013 awards will be presented at the 25th APS Annual Convention in Washington, DC, May 23-26, 2013.

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resilience (Graham & Hudley, 2005; Spencer, 2006). For example, broadly accepted theories arguing for the primacy of an internal locus of control[1] have been contested, pointing to the efficacy of an external locus of control when populations face persistent stigmatization that they do not control (Crocker & Major, 1989). Research on the role and complexity of racial socialization has pushed boundaries around accepted conceptions of identity development (Bowman & Howard, 1985; Boykin & Toms, 1985).

On a more abstract level, there are formal proofs that diversity of orientations can even trump ability in problem solving. For example, Scott Page (2007) has documented how the presence of diverse perspectives (including gender and ethnic diversity) in collective problem-solving in business and other organizations leads to more innovative solutions. Even when the focus is on the same topics with the same methods and measures, diversity may help. The sociology of science tends to converge on accuracy when different biases or errors cancel each other out, but this is less likely to happen when lack of diversity leads to correlated error.

Another warrant for consideration is evidence of the fundamental role of culture in human learning, suggesting that there is no reason to think learning in science or the practices of science is somehow acultural or simplistically universal. Current developmental research in both cultural psychology, as well as cultural and social neuroscience, underscores the fact that human development is an outgrowth of dynamic relations between our biological endowments and the shaping role of our environment. Indeed, developments in the fields of cultural and social neuroscience provide a window into how human learning is an outgrowth of the threading of biological and environmental (i.e., cultural) resources, from the levels of epigenetic change to broader life-course trajectories (Quartz & Sejnowski, 2002).

If participation in cultural practices is central to our development as humans, then *how* we learn science, for example, will be influenced by the range of practices in which we routinely engage (Bang et al., 2007; Hermann et al, 2010; Lee, 2008). These diverse pathways for learning and development enhance our ability as a species to survive. What such diversity means for the teaching and learning of science, particularly in K-12 environments, remains a significant challenge that we think has important implications for achieving greater equity in opportunities to learn science. This includes not only *how* students learn science, but *what* science they learn, and what conceptions of *doing science* become part of their repertoires.

Developing a robust epistemology of science is enhanced when students learn that knowledge in science is contested. Because the sciences are intended to have predictive or explanatory power, challenges to ecological validity often arise from diverse of points of view. These contestations have been documented nicely in the history of science, especially when scientific practices and investigations went beyond a Eurocentric focus. Osborne and others argued for the importance of teaching the history of science in K-12 education (Monk & Osborne, 1997). For example, attention to indigenous knowledge systems for environmental sustainability illustrates scientific practices (which include replicability and predictive value) that broaden traditional epistemologies (Atran & Medin, 2008). The fields of ethnobiology and ethnomathematics provide additional illustrations.

Our overarching argument is that both equity outcomes as well as knowledge production in the sciences are enhanced by attention to cultural diversity specifically diversity of ideas, methods, populations, and sites of scientific practice. Practices across the sciences, including psychological science, are cultural, and the norms that influence such practices emerge from across diverse sites, from diverse practitioners, addressing diverse problems. Just as the diversity of pathways for development within and across human populations does not argue there is nothing holding us as a species together, that recognizing the cultural embeddedness of scientific research does not undermine the canons that hold the sciences together. Rather, it is the dynamic relations across sites of diversity that make for adaptability to changing circumstances, a hallmark for all kinds of development and growth.

Recognizing the cultural nature of science practices provides a new perspective on the engagement with and learning of science. When women and underrepresented minorities see their own orientations and practices recognized and supported as relevant to the practices of science, the field of science should seem much more attractive to them. But our key thesis is that our sciences will be all the better for the perspectives that diverse scholars can bring to them. A psychological science owned and operated by Western, White middle-class scholars resembles a self-ethnography more than a true psychological science. ●

References

Atran, S., & Medin, D. L. (2008). *The native mind and the cultural construction of nature.* Boston, MA: MIT Press.

Bang, M., Medin, D. L., & Altran, S. (2007). Cultural mosaics and mental models of nature. *Proceedings of the National Academy of Sciences, USA, 104*, 13868-13874.

Bowman, P., & Howard, C. (1985). Race related socialization, motivation and academic ahicevement: A study of Black youths in three generation families. *Journal of American Academy of Child Psychiatry, 24*, 134-141.

Boykin, A. W., & Toms, F. D. (1985). Black child socialization: A conceptual framework. In H. P. McAdoo & J. L. McAdoo (Eds.), *Black children: Social, educational, and parental environments* (pp. 33-52). Newbury Park, CA: Sage.

Crocker, J., & Major, B. (1989). Social stigma and self-esteem: The self-protective properties of stigma. *Psychological Review, 96*, 608-630.

Gardipee, F. M., Strobel, D. A., Allendorf, F. W., Luikart, G., Hebblewhite, M., & Clow, R. (2007). *Development of fecal DNA sampling methods to assess genetic population structure of greater Yellowstone bison*. Unpublished Masters thesis, University of Montana, Missoula.

Graham, S., & Hudley, C. (2005). Race and ethnicity in the study of motivation and competence. In A. J. Elliot & C. S. Dweck (Eds.), *Handbook of competence and motivation* (pp. 392-413). New York, NY: Guilford Press.

Gutierrez, K., & Rogoff, B. (2003). Cultural ways of learning: Individual traits or repertoires of practice. *Educational Researcher, 32*, 19-25.

Henrich, J., Heine, S. J., & Norenzayan, A. (2010). Most people are not WEIRD. *Nature, 466*, 29.

Herrmann, P., Waxman, S. R., & Medin, D. L. (2010). Anthropocentrism is not the first step in children's reasoning about the natural world. *Proceedings of the National Academy of Sciences, USA, 107,* 9979-9984.

Hrdy, S.B. (1986). Empathy, polyandry, and the myth of the coy female. In R. Blier, (Ed), *Feminist approaches to science* (pp. 119-146). New York, NY: Teachers College Press.

Lee, C. D. (2008). The centrality of culture to the scientific study of learning and development: How an ecological framework in educational research facilitates civic responsibility. *Educational Researcher, 37*, 267-279.

Monk, M., & Osborne, J. (1997). Placing the history and philosophy of science on the curriculum: A model for the development of pedagogy. *Science Education, 81*, 405-425.

Page, S. (2007). *The difference: How the power of diversity creates better groups, firms, schools and societies.* Princeton, NJ: Princeton University Press.

Quartz, S. R., & Sejnowski, T. J. (2002). *Liars, lovers, and heroes:What the new brain science reveals about how we become who we are*. New York, NY: William Morrow.

Rogoff, B. (2003). *The cultural nature of human development*. New York, NY: Oxford University Press.

Spencer, M. B. (2006). Phenomenology and ecological systems theory: Development of diverse groups. In W. Damon & R. M. Lerner (Eds.), *Handbook of child psychology* (6th ed., Vol. 1, pp. 829-893). New York, NY: Wiley.

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Hard Hat One Day, Suit the Next

The Life of a Psychological Scientist?

By David M. Cades

As a scientist in the human factors practice, my work is focused on evaluating and understanding human performance and safety in product and system use. By working to understand the limitations and abilities of people's cognitive and human behavioral characteristics, such as perception reaction time, anthropometrics, attention, and memory, we provide insight into what a reasonable person in a given situation can be expected to do.

My journey to working in the field of human factors consulting has been filled with familial support, chance encounters, and — of course — good networking. I was first exposed to psychology at a very young age. It was actually before I was born. My mother, Amy Cades, began her doctoral program in counseling psychology when she was nine months pregnant with me. Her dissertation topic was on postpartum depression, and it was not unheard of during my first few years of life for me to be found crawling around the floor at a state-run inpatient psychiatric facility while my mother led group therapy. Fast-forward 16 years: I began to look at undergraduate programs with some thought of following in my mother's footsteps. More specifically, I was interested in the more non-traditional applied psychological work that my mother was doing, which was interviewing applicants for positions in various law enforcement organizations. As I continued my college search, I inquired about opportunities in applied psychology at the undergraduate level.

In fact, it was on one such visit to Tufts University's Psychology Department that I first heard of Human Factors and Ergonomics (HFE). I was touring the psychology department when a professor came up to me and offered to tell me about the various programs Tufts psychology had to offer. I was sold on HFE the second that Professor Sal Soraci described it to me in his office. I graduated from Tufts University with a bachelor's degree in Human Factors in 2003, and two years, later I was looking to go back to school for my doctorate.

Prior to beginning my doctoral program at George Mason University (GMU) near Washington, DC, in the Human Factors and Applied Cognition program (http://archlab.gmu.edu), I attended the national meeting of the Human Factors and Ergonomics Society and met with my future advisor at GMU, Deborah Boehm-Davis (http://archlab.gmu.edu/people/dbdavis/). In addition to meeting my future professors and classmates, I was able to use my time at the conference to take in the breadth of the field with technical expertise including, but not limited to, surface transportation, cognitive engineering and decision making, aerospace systems, human performance modeling, product design, and forensics.

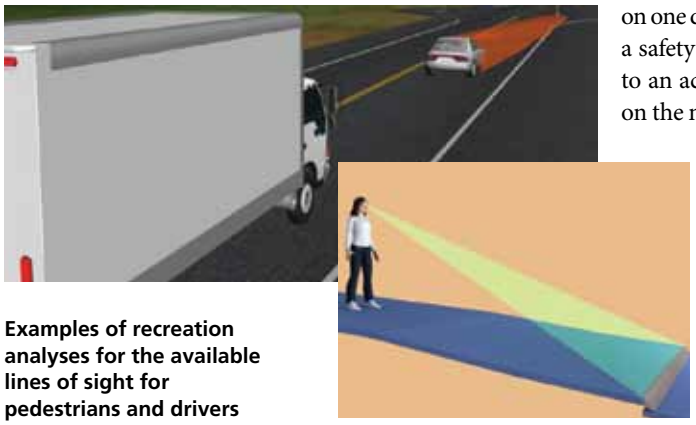
While at GMU, my research focused on understanding and evaluating how people handle interruptions and distractions in dynamic real-world environments from the classroom to the flight deck. In graduate school, I was able to work with airline pilots, the military, technology companies, government organizations, and others, as I tried to make their products and procedures safer, more efficient, easier, and more enjoyable.

As I was finishing up my dissertation at GMU, my wife began her graduate work in Chicago. While I was attending a meeting of the Chicago chapter of the Human Factors and Ergonomics Society, I mentioned that I had just moved to the area, was preparing to defend my dissertation, and was looking for a human-factors-related job. At the time, I did not have my heart set on one particular aspect of HFE. Rather, I knew I wanted to continue working in an applied setting with the opportunity to work on multiple projects. As luck would have it, at that meeting, I met Sunil Lakhiani (www.exponent.com/sunil_lakhiani), a managing engineer at Exponent in the human factors practice. At that point, I had not really considered going into human factors consulting, especially when some of the consulting was related to litigation. But this was due more to lack of exposure to it than anything else. As Sunil described the field and the job to me, it all began to sounded more interesting, and I was invited in for an interview.

Human factors scientists and engineers measure the contribution both of intrinsic and extrinsic factors affecting driver behavior.

David M. Cades *is a scientist in the Human Factors practice at Exponent's Chicago office. His work includes investigating issues of visibility, attention, and human performance in vehicle accidents as well as vehicle operation, and working to understand the negative effects of distractions and interruptions on high vigilance tasks in specialized environments, such as commercial airports. For more information, visit* www.exponent.com/david_cades *or contact David at dcades@exponent.com.*

I have been working at Exponent for almost a year and a half now, and whether it was luck or fate, I am grateful that I met Sunil at that meeting. Exponent is an engineering and scientific consulting firm with about 900 consultants covering over 90 disciplines. We perform in-depth analyses and investigations, often in multidisciplinary teams, to determine how an event occurred, or to evaluate a new product or system.



Examples of recreation analyses for the available lines of sight for pedestrians and drivers

Much like the field of human factors, the breadth of projects that I have worked on at Exponent has been impressive. Since joining the company in January 2011, I have worked on projects involving both commercial and personal vehicles, industrial construction sites and equipment, household appliances, video game entertainment systems, home theater products, personal protective equipment, product warnings and labels, and aviation vehicles and systems. I have been able to go in the field and perform on-site inspections and evaluations for a number of these projects. In how many other jobs could someone with a PhD in psychology on one day, put on steel-toed boots, a safety vest, and a hard hat to go to an active construction site and on the next, put on a suit to testify in court?

One of my favorite aspects of graduate school was having the opportunity to work on multiple projects simultaneously. At Exponent, not only have I found a professional environment which supports that experience, but also each and every project presents a new set of challenges allowing me to constantly add to my breadth and depth of knowledge and experience. I work in a fast-paced, quick-turnaround atmosphere with scientists and engineers from many different disciplines who are all experts in their respective fields. It seems like each day I get to work on a variety of projects, go to interesting places, and try and make a difference for our clients.

It's been quite a journey from the halls of a state psychiatric center to human factors consultant, with the one constant throughout being psychological science. ●

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Puzzles, Grand Ideas, and Science

By Joel Weinberger

Digging into the history of psychological science, the Observer *has retrieved classic interviews with prominent psychological scientists for an ongoing series* Psychology (Yesterday and) Today. *Each interview is introduced by a contemporary psychological scientist, and the full text of the interview is available on the* Observer *website. We invite you to reflect on the words of these legendary scientists, and decide whether their voices still resonate with the science of today.*

Dave McClelland has been an intellectual hero of mine since I completed my dissertation in 1983. His model of motivation helped me form my hypotheses, and in 1986, I got to meet David when he interviewed me for a postdoc position. He did not disappoint, and he became a flesh-and-blood hero to me as well. I remember being amazed at the number of ideas he tossed around during our lunch. They seemed endless, and they all seemed empirically testable. I was fortunate enough to become his postdoc, and the years I spent in his lab were two of the most intellectually stimulating and enjoyable years of my life. During our time together, we (with Richard Koestner) wrote a now classic *Psychological Review* paper. With Richard and Carol Franz, we conducted several studies that were published in major peer-reviewed journals. My time with Professor McClelland shaped my career and the way I approach my work. It affected and continues to affect the way I think about psychological science. I am not alone. The list of people he influenced this way is quite long and includes many individuals who are prominent in the field.

To write this article, I reread his 1971 interview in *Psychology Today*. It showed me what had remained constant and what had changed from that time to later in David's career when I knew him. What stayed the same was that David was interested in aspects of personality that people typically could not articulate about themselves, but were nonetheless central to their functioning. He was interested in the inner person and what made people who they were. His book title, *Power: The Inner Experience*, captures his way of looking at psychological science. He also thought big. Simple experiments or studies were of less interest to him than grand ideas. But it always had to be empirically based. *The Achieving Society* attempted to explain nothing less than the rise and fall of civilizations through societally caused changes in personality variables. His work in India compared an experimental village with a control village to test whether motivational training could change economic productivity (it could and did). When I knew him, he was attempting to identify the hormonal substrate of implicit motives. He was looking for connections between the immune system and personality variables. It seems that no one conducts the kind of grand studies that David routinely carried out any more. We live in an age of small-bore studies.

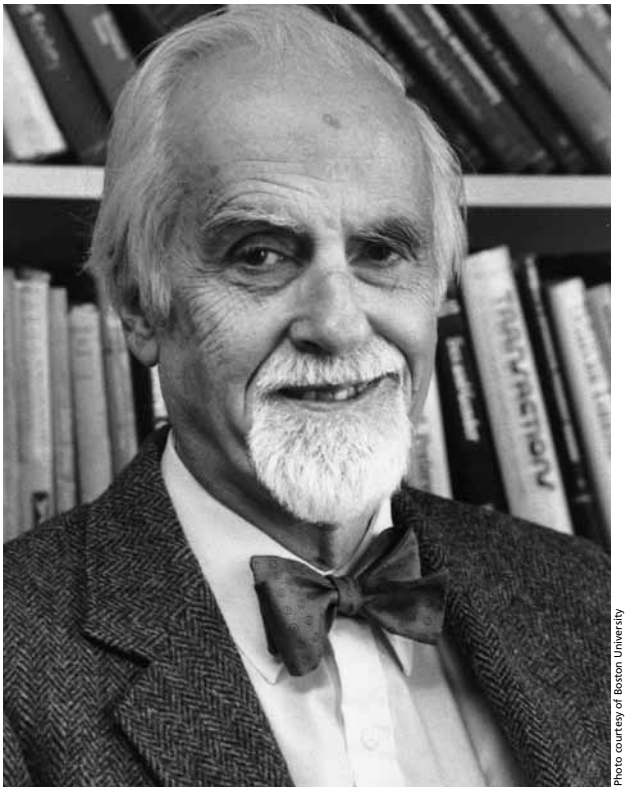


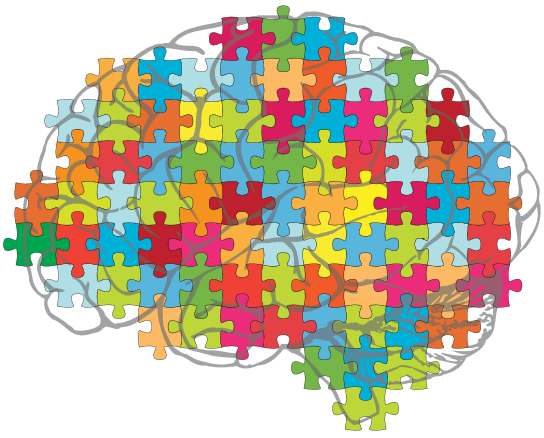
Photo courtesy of Boston University

David McClelland

Another thing that did not change about David was how ahead of his time he was. He championed the importance of unconscious processes well before, even decades before, they became accepted in the field. We called them 'implicit processes' in our 1989 *Psychological Review* paper. That terminology (also used by Dan Schacter) caught on, and it is still in use today. He chose the term after we received some criticism in an earlier draft for describing the processes as 'unconscious.' In the 1950s, he wrote of measuring competencies rather than relying on standardized tests. This innovative idea is finally beginning to catch on now, more than 60 years later. The idea that immune functioning can be affected by psychological variables seems standard now, but it was quite controversial when McClelland posed it. He told me of arranging a meeting with a Nobel Prize winning Harvard

Joel Weinberger *is a professor of psychology at Adelphi University. He investigates unconscious processes in experimental, business, political, and clinical paradigms. He is also a practicing clinical psychologist. He can be contacted at Weinberger@adelphi.edu.*

biologist specializing in the immune system just to bounce around some ideas. The meeting came to an early end when the man declared that the immune system had no contact with any system related to human psychology. David pursued the idea anyway. As was often the case, it turned out that he was right.



Some things did change from the time of the *Psychology Today* interview to my time working with him. At the time of the interview, he believed that motives were completely learned and were only slightly below the awareness threshold. By the time I knew him, he came to believe that they had a biological and genetic component that could be affected by learning and that they were usually completely unconscious. He had moved to a more interactionist position concerning motive development and to a view of human functioning as more controlled by processes that arose outside of awareness. At the same time, he also became a bit more accepting of self-report variables. Early in his career, he thought very little of them. One of his papers was "Opinions Predict Opinions: So What Else is New?" (1972). By 1989, he argued that conscious self-reports, which he called "self-attributed," were orthogonal to implicit processes and predicted different outcomes. The data made him change his position, and thus, he became an early advocate of the view of parallel explicit and implicit processes that dominates the field today.

There was also the David McClelland I came to know. That he had enormous talent goes without saying. A simple listing of his accomplishments could use up all the words allotted to me for this piece. He was incredibly creative and open to any hypothesis. He was curious about everything. If an idea could be empirically examined, it was worthy of consideration. If it could not, it was still interesting to talk and think about. And who knows, maybe one day we'd figure out a way to test it. He had an uncanny ability to discern relationships in data that others could not see. One day, I was looking over a large data set and doing it systematically, one hypothesized variable at a time. He looked over my shoulder for a few minutes. He then told me to skip to a hypothesis that was about fifth on my list. I did so, and it was statistically significant. Amazed, I asked how he knew. He just laughed and walked away. He loved taking data home and poring over it. He would return having discovered relationships that none of us had seen. He would then run a second study attempting to replicate these findings so that he could believe them. I finally found out the developmental source of this ability. I learned that as a child, he would solve chess problems and publish the solutions in chess magazines. The skills he developed through solving these puzzles enabled him to discern solutions to problems and relationships in data that most of the rest of us could not find. It was not a coincidence, I suspect, that the first major motive he studied was achievement motivation.

Perhaps related to his love of puzzles, and certainly related to his interest in achievement motivation, David was also a successful entrepreneur. He co-founded a company called McBer that consulted with businesses and corporations. He had a home in Hawaii and raised exotic flowers there that he sold for profit. But he was not particularly interested in money. His business activities interested him because of the challenge they offered and the freedom they bestowed on him to pursue his passions. It was a pure case of achievement motivation.

David also had a powerful moral and spiritual side that may be unknown to many. He was a practicing Quaker, having converted from his original Methodist upbringing. His work and travels to India deeply influenced him, and he became a great admirer of Indian culture, reading the Gitas, and incorporating Indian ways into his life. He had spiritual teachers and wanted to investigate Eastern precepts.

Finally, David had a cranky side that I personally found endearing. He complained frequently about the wrong direction psychology was taking with its emphasis on self-report and attitudes. He thought that most of the interesting stuff took place beneath the surface, and he could not understand why everyone else did not see that. He felt that his work was not influential, and that he was like the proverbial David fighting the establishment Goliath. Pointing out to him that he chaired the department of social relations at Harvard for many years, that he and his work were world renowned, and that he therefore was the establishment, had no effect on these thoughts. He complained that his students often did not follow him into the study of motivation. But he encouraged originality and independence and would implicitly disapprove of others following up his work by tweaking studies and systematically enlarging the scope of previous studies. The flip side of this disapproval was a complete openness to ideas promoted by his students and colleagues. He would get excited by new and innovative ideas. He would encourage the work and provide the resources needed if he could. He would help shape the projects and sharpen the thinking behind them. And then he would be proud of the results, although that was not always obvious. Another idiosyncrasy was that he rarely told one of his students how well he thought of his or her work in any detail. He would tell another colleague or student, we would exchange the information, and that is how we would learn about what he thought of our work.

David was a complicated and multi-talented man. He was a great and thoroughly empirical psychologist who liked grand ideas and studies. He was a hard-nosed scientist, an entrepreneur, a spiritual man, and a curmudgeon. And he was a great mentor as well as a great person. We are unlikely to see anyone like him any time soon. ●

?#@*&%! from Page 21

achieves. Swear words can achieve a number of outcomes, as when used positively for joking or storytelling, stress management, fitting in with the crowd, or as a substitute for physical aggression. Recent work by Stephens et al. even shows that swearing is associated with enhanced pain tolerance. This finding suggests swearing has a cathartic effect, which many of us may have personally experienced in frustration or in response to pain. Despite this empirical evidence, the positive consequences of swearing are commonly disregarded in the media. Here is an opportunity for psychological scientists to help inform the media and policymakers by clearly describing the range of outcomes of swearing, including the benefits.

Is it bad for children to hear or say swear words?

The harm question for adult swearing applies to issues such as verbal abuse, sexual harassment, and discrimination. When children enter the picture, offensive language becomes a problem for parents and a basis for censorship in media and educational settings. Considering the ubiquity of this problem, it is interesting that psychology textbooks do not address the emergence of this behavior in the context of development or language learning.

Parents often wonder if this behavior is normal and how they should respond to it. Our data show that swearing emerges by age two and becomes adult-like by ages 11 or 12. By the time children enter school, they have a working vocabulary of 30-40 offensive words. We have yet to determine what children know about the meanings of the words they use. We do know that younger children are likely to use milder offensive words than older children and adults, whose lexica may include more strongly offensive terms and words with more nuanced social and cultural meanings. We are currently collecting data to better understand the development of the child's swearing lexicon.

We do not know exactly how children learn swear words, although this learning is an inevitable part of language learning, and it begins early in life. Whether or not children (and adults) swear, we know that they do acquire a contextually-bound swearing etiquette — the appropriate 'who, what, where, and when' of swearing. This etiquette determines the difference between amusing and insulting and needs to be studied further. Through interview data, we know that young adults report to have learned these words from parents, peers, and siblings, not from mass media.

Considering that the consequences of children's exposure to swear words are frequently cited as the basis for censorship, psychological scientists should make an effort to describe the normal course of the development of a child's swearing lexicon and etiquette. Is it important to attempt to censor children from language they already know? While psychological scientists themselves do not establish language standards, they can provide scientific data about what is normal to inform this debate.

Has swearing become more frequent in recent years?

This is a very common question, and it's a tough one to answer because we have no comprehensive, reliable baseline frequency data prior to the 1970s for comparison purposes. It is true that we are exposed to more forms of swearing since the inception of satellite radio, cable television, and the Internet, but that does not mean the average person is swearing more frequently. In our recent frequency count, a greater proportion of our data comes from women (the reduction of a once large gender difference). We interpret this finding as reflecting a greater proportion of women in public (e.g., many more women on college campuses) rather than a coarsening of women. Our forthcoming research also indicates that the most frequently recorded taboo words

have remained fairly stable over the past 30 years. The Anglo-Saxon words we say are hundreds of years old, and most of the historically offensive sexual references are still at the top of the offensiveness list; they have not been dislodged by modern slang. Frequency data must be periodically collected to answer questions about trends in swearing over time.

Thus, our data do not indicate that our culture is getting "worse" with respect to swearing. When this question arises, we also frequently fail to acknowledge the impact of recently-enacted laws that penalize offensive language, such as sexual harassment and discrimination laws. Workplace surveillance of telephone and email conversations also curbs our use of taboo language.

Do all people swear?

We can answer this question by saying that all competent English speakers learn how to swear in English. Swearing generally draws from a pool of 10 expressions and occurs at a rate of about 0.5 percent of one's daily word output. However, it is not informative to think of how an average person swears: Contextual, personality, and even physiological variables are critical for predicting how swearing will occur. While swearing crosses socioeconomic statuses and age ranges and persists across the lifespan, it is more common among adolescents and more frequent among men. Inappropriate swearing can be observed in frontal lobe damage, Tourette's disorder, and aphasia.

Swearing is positively correlated with extraversion and is a defining feature of a Type A personality. It is negatively correlated with conscientiousness, agreeableness, sexual anxiety, and religiosity. These relationships are complicated by the range of meanings within the diverse group of taboo words. Some religious people might eschew profanities (religious terms), but they may have fewer reservations about offensive sexual terms that the sexually anxious would avoid. We have yet to systematically study swearing with respect to variables such as impulsivity or psychiatric conditions, (e.g., schizophrenia and bipolar disorder). These may be fruitful avenues along which to investigate the neural basis of emotion and self-control.

Taboo words occupy a unique place in language because once learned, their use is heavily context driven. While we have descriptive data about frequency and self reports about offensiveness and other linguistic variables, these data tend to come from samples that overrepresent young, White, middle-class Americans. A much wider and more diverse sample is needed to better characterize the use of taboo language to more accurately answer all of the questions here. ●

References

Janschewitz, K. (2008). Taboo, emotionally-valenced, and emotionally-neutral word norms. *Behavior Research Methods, Instruments, & Computers, 40,* 1065-1074.

Jay, T.B. (2009). The utility and ubiquity of taboo words. *Perspectives on Psychological Science, 4,* 153–161.

Jay, T.B. (2009). Do offensive words harm people? *Psychology, Public Policy, and Law, 15,* 81-101.

Jay, T.B., & Janschewitz, K. (2008). The pragmatics of swearing. *Journal of Politeness Research: Language, Behavior, Culture, 4,* 267-288.

Mehl, M., Vazire, S., Ramirez-Esparza, N., Statcher, R., & Pennebaker, J. (2007). Are women really more talkative than men? *Science, 317,* 82-82.

Rozin, P. (2006). Domain denigration and process preference in academic psychology. *Perspectives on Psychological Science, 1,* 365-376.

Stephens, R., Atkins, J., & Kingston, A. (2009). Swearing as a response to pain. *NeuroReport, 20,* 1956-160.

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Improving Students' Writing with Wikipedia

By Margaret P. Munger

Most students don't like writing papers. Honestly, how many of us like grading papers? But to learn how to think critically, they need to learn how to ask questions, find good sources using the library's abundant resources, read and understand journal articles, and write about those journal articles intelligently. In upper-level courses, we can add the task of developing a new research question, but I've found getting new psychology students to write excellent summaries is a good assignment. Good summaries are hard because they require excellent search and reading skills in addition to the ability to communicate about complicated material with style and grace.

I've always had my 200-level cognitive psychology students write a "literature review," which includes learning how to use PsycINFO to find related articles on a cognitive topic of their choice and writing a 1,500-2,000 word description of the current understanding of that specific research area. Students had to turn in a list of six possible references to verify that their planned topic and journal articles were acceptable along with the PsycINFO records for all the articles. For the final product, I required that they write about four journal articles.

This assignment may be very familiar to instructors, and it is a good introduction to some of the research skills necessary for any kind of academic work. Realizing that the indexes provided by the library are different from free online search engines, and that a peer-reviewed journal article provides a different quality of information than a newspaper article or press release, are important first steps in learning how to do research.

When I read about the APS Wikipedia Initiative challenge to have students help correct Wikipedia, I thought it sounded like a really neat idea. To write a good Wikipedia article, the students need the same reading and research skills that my old assignment required, with the advantage of contributing to the public good. Davidson College's mission statement declares our intent "to assist students in developing humane instincts and disciplined and creative minds for lives of leadership and service," a sentiment shared by many colleges. I believe that careful and rigorous study of any discipline can support this, but there can be quite a distance between the classroom and the service for some of us. The Wikipedia Initiative changes that because part of civic engagement is providing accurate information to forums that are accessible to a larger community.

Margaret P. Munger *is a professor of psychology at Davidson College. She and her students investigate visual cognition, especially how humans perceive objects in motion. She can be contacted at mamunger@davidson.edu.*

To learn about Wikipedia, I wrote an entry about the particular task I've been studying for years, representational momentum. Writing the article really helped me think through how this writing task was similar to and different from academic writing, and it confirmed for me that writing for Wikipedia would help students develop the reading and research skills that I wanted them to have. It also taught me that learning Wikipedia's culture and markup were things that were simultaneously fun and daunting. I decided to structure

Sections for Psychology Articles

Initial description

In the most general way, describe your topic. Imagine this is the only paragraph an individual reads. What should they know? What's the basic phenomenon?

Basic methods

- Do NOT publish whole lists of stimuli (often appearing in the Appendix). If you do, you will compromise that stimulus set and it can't be used in the future (BOO!). Use examples.
  - Ask me about your examples before you publish them, even in your sandbox!
- A diagram might be really helpful here. You have to make your own version (not copy it from a pdf!), and PowerPoint is actually pretty good for this. Once the figure is done, you can save it as png and upload it to WikiCommons.

Specific results

This is likely the bulk of your article. Think carefully about how to organize this, with perhaps the most important results first, and then variations later.

Theory

- Always keeping in mind that you are presenting with a neutral point of view, address what researchers are saying about the larger picture.
  - You might not be in a position to address this, depending on your particular topic. Be in touch with questions.

Wikipedia Grade Details (Dates in Weekly Schedule and on Project Space)

Percentage of total course grade, adds up to 34%

- User accounts (0.5%)
- New source (0.5%)
- Sources on draft/discussion (2%)
- Moving to main space, content evaluated (10%)
- Peer review (2%)
- Did you know.../Good article nominations (1%)
- "Final" article (16%)
- Reflective essay (2%)

my article, and the students' assignment, to include sections equivalent to a typical journal article.

Writing a Wikipedia entry also taught me that I needed to include some smaller assignments to help the students learn about Wikipedia and markup. I used the Wikipedia Campus Ambassador syllabus to get an initial description, and here are the critical points I chose for course credit.

Students read Wikipedia's Five Pillars, and we had a brief class discussion about whether or not they should register anonymously. I told them I had chosen to use my real name because I was doing this project to be part of a solution. The vast majority of my students registered with their full names or names related to their official college email.

Wikipedia Day 1

Registering, linking, and markup

User page details…

- Register at Wikipedia
- Link to Davidson (external)
- Link to course page
- APS template
- Infobox user template (make it pretty!)
- Talk to a fellow classmate on their User page

Places to register…

- Register at APS
- Add your name to the list of students on our course page

I used three Fridays to work on Wikipedia in class. On the first day, students registered at Wikipedia and edited their new user pages to include some specific information, which meant they had to learn some markup. My own user page had all that they needed, and they could have simply copied my work, but I encouraged them to search for items so they could see how much documentation is available on Wikipedia markup. On that first day, they also registered at APS and added their name to the list of students on our Wikipedia course page, which meant they had to edit that page.

The second 'Wikipedia day' began with a visit from one of our librarians, who introduced the students to PsycINFO. Their task was to find a journal article about a topic from our cognitive textbook and add the reference using the cite menu journal template to their Wikipedia sandbox (a page under their user page where they can practice). The journal template for citations is very nice, though my students were unnerved by the difference between the textbox entry with the markup and the formatted preview.

Finding Sources and Adding References

What you type in the textbox:

More representational momentum occurs for camera rotations compared to translations through a scene.<ref name=Brown>{{cite journal|last=Brown|first=Travis A.|coauthors=Munger, Margaret P.|title=Representational momentum, spatial layout, and viewpoint dependency|journal=Visual Cognition|year=2010|volume=18|pages=780–800|doi=10.1080/13506280903336535}}</ref>

{{reflist}}

What you see as the preview (and when you save the page):
More representational momentum occurs for camera rotations compared to translations through a scene.[1]

1. ^Brown, Travis A.; Munger, Margaret P. (2010). "Representational momentum, spatial layout, and viewpoint dependency". *Visual Cognition* **18**: 780–800. doi:10.1080/13506280903336535.

I had students work in pairs on chosen articles because of the scale of what I wanted them to do, and because of the public nature of the final version. In writing my own Wikipedia entry, I had only 1,000 words, but I had 22 references. My students' assignment was to find 15 articles to add. On the third and final,dedicated 'Wikipedia day,' I gave them class time to evaluate their current Wikipedia article and begin talking about how to improve it. When an article exists in Wikipedia, you're supposed to propose your changes on the article's talk page to let others who are interested comment on your plan. My students had to do this over the weekend, and then a first draft was due four weeks later.

When their first drafts were moved to the main space (posted publicly in Wikipedia), my students were assigned to peer review two of our edited articles. They were particularly good at letting fellow student editors know when definitions or organization wereconfusing. One thing I noticed was how different typical student writing was not only from APA style, but from Wikipedia's style as well. A cosmetic difference is that Wikipedia uses endnotes instead of inserting author and date in the text, but a more interesting difference is the "headline" nature of the Wikipedia writing style. To write either way, you need to understand the research, and we talked about how they needed

Writing Concisely

Typical student sentence

"In a study done by Brown and Munger (2010), they manipulated whether the camera was rotating or translating through the scene and found larger representational momentum for rotations."

APA rewrite

"Brown and Munger (2010) found larger representational momentum for camera rotations compared to translations."

Wikipedia rewrite

"More representational momentum occurs for camera rotations compared to translations through a scene.[1]"

1. Endnote reference

to tighten up their prose as they worked on their revisions. After receiving feedback from their peers and me, students had three weeks to produce their final version.

The Wikipedia syllabus includes two ways articles can be noticed within Wikipedia: "Did you know…" and "Good Article" status. "Did you know…" is a section on the home page of Wikipedia that lists new content once it has been checked by someone other than the author for proper citations and style. "Good Article" status involves a more thorough review, and once an article passes, a small green plus sign is added to the top right of the page. I included these nominations as part of my students' assignment, but it turned out that most of my students' work did not qualify for "Did you know…" because they were editing existing articles. The three that did were very excited, and had their moment of glory on the front page, along with thousands of page visits. Two of my students voluntarily nominated their articles for "Good Article" review, and it will be interesting to see if they follow through with the additional revisions, though this won't affect their grade. I'm not going to include this part in future assignments because I want the focus to be on improving content, not only adding it.

Teaching students about Wikipedia in addition to cognitive psychology was certainly more work for me, but I'll do it again because the students were excited about this writing assignment — not just polite or diligent, but excited. They were excited on the first day of class, and were still excited as they decided how to improve the articles and found new references. Many commented on how much it mattered that their work would be public, not just read by me for a grade. In fact, many told their families and friends to go read their articles. Being able to contribute to the public good was important to them, and they did this in addition to learning the first steps to doing scholarly research. ●

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What Can We Do About Student E-mails?

By Steffen Wilson and Dan Florell

You likely begin each workday by checking your professional e-mail account. The paper you assigned in your senior seminar course is due today, and you are expecting to receive some e-mails from students regarding this assignment. You relax into your desk chair with a cup of coffee and begin reading the new messages in your inbox. You feel a bit of a sinking sensation in your stomach as you read this:

> *I'm in my dorm's computer lab working on assignment 4. Someone who was half asleep/possibly drunk just stumbled through the room, caught their foot on the cord, and unplugged my computer. Of course, everything that I had done has completely evaporated. I'm still astounded that it even happened. How can you NOT see the cord laying against the wall? Better yet, how do you manage to catch your foot in the cord that is AGAINST THE WALL. Ha, sorry… I'm ranting now. I just don't think I have the heart to re-do my paper tonight. I'm so sad that it is all gone. L I was so close to being done… and now it's 3am and I have a headache. May I please have a few more days to complete it? Gah, I'm having horrible luck this week. I really hope it turns around soon.*

We simultaneously received this e-mail from a student in a class we were teaching together, and we were both at a loss for how to respond. We found ourselves discussing not only how to respond in a way that was professional, helpful, and fair to this student, but also how frequently we receive inappropriate content in student e-mails. So we would like to share some of our thoughts on how to respond in a professional manner to this particular e-mail as well as to other types of problematic e-mails from students.

Professor-Student E-mail Communication

E-mail has become the most widely used instructional technology (Brunner, Yates, & Adams, 2008; Jones, 2002; Kistantas & Chow, 2007), and it is being used primarily for course task-related purposes (Duran, Kelly, & Keaten, 2005; Sheer & Fung, 2007). Students in traditional, hybrid, and fully online courses were found to prefer seeking help from professors via e-mail (Kitsantas & Chow, 2007). E-mail use among individual students, however, is quite variable. Some students use e-mail with professors quite a bit, while others send very few messages (Atamian & DeMoville, 1998). Some studies suggest that e-mail communication seems to be driven more by faculty (Sheer & Fung, 2007), while others have found that students send faculty twice as many e-mails as faculty send students. Female faculty members have been found to receive more student e-mails (Duran et al., 2005) and to be more likely to receive inappropriate content in e-mails from students (Brunner et al., 2008).

In many ways, the increased use of e-mail over the past decade is positive. E-mail creates a paper trail to help both parties remember the content of a discussion and allows a uniform message to be sent to a large group. In addition, e-mails can be sent in real time, right when a problem or solution to a problem arises. It also allows for a well-thought response that minimizes emotional reactions (Bushweller, 2005). Reticent students are more likely to communicate with their professors via e-mail than they are to communicate face-to-face. Part-time instructors, who can be difficult to reach, can become more accessible via e-mail (Haworth, 1999).

E-mail communication with students also comes with potential liabilities and frustrations for faculty (Brink, 2001). Course evaluations were found to be affected by perceptions of faculty e-mail helpfulness and promptness (Sheer & Fung, 2007). Low levels of emotional content in e-mail, a standard characteristic of professional e-mail, was found to frustrate student e-mail users (Kato, Kato, & Akahori, 2008). Additionally, e-mail can contain more hostile comments (Dyer, Green, Pitts, & Millward, 1995) and can be uninhibited compared to face-to-face communication (Garton & Wellman, 1995). It should be noted that only about four percent of the e-mails students are sending are being sent to professors (Gatz & Hirt, 2000). Professor-student e-mail, therefore, is likely a student's first exposure to professional e-mail. Thus, students need instruction and modeling on professional e-mail etiquette (Brunner et al., 2008).

Asynchrony, Depersonalization, and Immediacy of the Message

There must be some unique factors that can explain some of the rudeness and disclosures that only seem to come from students via e-mail. The answer to these questions goes along with the unique factors e-mail brings to student-instructor interaction. The first factor is the *asynchronous* nature of e-mail. Because e-mail is a one-way form of communication, instructors cannot help students modify their message through comments or nonverbal cues. These components of verbal interaction typically prevent students from going too far with self-disclosure or provide them with feedback that they should wrap up their comments (Hollingshead, McGrath, & O'Conner, 1993).

The second factor is *depersonalization*. E-mail does not require a student to see the instructor, so the typical face-to-face social interaction norms are suspended. Without norms to rely upon, students may write from within their stream of

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consciousness, in which words are not carefully considered (Hiltz & Turoff, 1986).

Asynchrony and depersonalization are compounded by a third factor, which is the *immediacy* upon which a message is sent. An e-mail can be sent within seconds of a student becoming frustrated. Communicating while emotions are running high tends to make these messages less thoughtful, so they're more likely to come across as rude and demanding (Sproull & Kiesler, 1986).

Varieties of Student E-mail

As instructors, we need to understand the role that asynchrony, depersonalization, and immediacy play in the content of our students' e-mails. To that end, we have classified various types of inappropriate student e-mails, and we have included an example of each type from e-mails that we received in the past academic year.

Passing the Buck: The student has gotten to a place in which they no longer want to commit the resources necessary to complete a task. Their solution is to cede the responsibility to the instructor.

> *Last week United Airlines lost my bag and the book for this class was in there… As of now I have no way of doing my home work because I cannot find anybody to let me borrow their book and I cannot afford a new book. I am pretty much stressed because at this rate of me not doing my homework because I do not have textbooks, I'm going to flunk out of every class. What should I do?*

Hail Mary: The student is way past the point at which makeup assignments and exams can help their grade. So they send an e-mail, usually in the last couple weeks of the semester, to plead their case for the instructor to grant the miracle of a passing grade.

> *I wanted to begin by telling you that you are a really great instructor. You are one of the best instructors that I have had while I have been at XXX. I have really enjoyed the class, and I have learned a lot this semester. Unfortunately, my grade does not reflect how much I have learned. I was wondering if there was any way that I can pass this class this semester?*

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If I had a Time Machine: This request is made by students who would like to make up assignments without a late penalty, and would like the instructor to pretend that the assignment was completed at the assigned time.

> *For some reason I didn't know we had outside activities to do in this class nor did I realize that there were online quizzes to take. Can you please fill me in on what I need to do? I am lost.*

Trivialization of a Course Requirement: The student deems their inability to complete a course requirement as an "inconvenience," thus suggesting that you ignore the requirement.

> *Mine [textbook] is on backorder. The bookstore said that since my order was placed last weekend they had to fill my book order after everyone else's. I cannot walk into the bookstore to purchase the book because I would lose money. I am sorry for the inconvenience.*

Too Much Information (TMI): A student decides that the instructor needs to know the most detailed intimate portrait of their lives to justify their request.

> *I am home today with a migraine headache, a sore throat, congestion, a cough, and a little bit of a fever. I have been drinking a lot of orange juice and take cold medicine so that I could come to class today and take the test. I went to the health clinic and they told me that I might be getting the flu. I am just really feeling really achy, and I have so much congestion that it is kind of gross to sit next to me. So, I think that I better stay home today. Can I make up the test tomorrow?*

I Want It Now!: Students assume that all grading is done by computers and that their assignments, papers, and/or exams should be graded within hours of being handed in. This message was sent within hours of a discussion forum ending:

I was looking over the scores for discussion posts and other assignments and notice that I have no score recorded for the Schools discussion forum. I am wondering why I have no scores recorded because I did complete the forum posts. Please respond promptly.

I Need You, I Really Need You: The student needs the instructor to assure them that they are reading the instructions correctly for class assignments.

> *I was wondering if what's on the study guide is everything we need to know for the final or if I should be studying my notes and the book for what's not on there as well. Please let me know.*

Blame the Professor: The student blames the professor for various shortcomings that have caused the student to do poorly.

> *I also just taken the test 4 today and finished it. I would greatly appreciate if you take my attempt into consideration. I really hope this C doesn't hurt my chances of keeping my XXXXX Scholarship and going to graduate school.*

We Only Learn When I Am There: A student sends the instructor an e-mail after missing a class to ask if anything important happened that day.

> *I accidently slept through all of my classes today, I was just emailing you to make sure I didn't miss anything important.*

We Are Best Buddies: The content of this type of e-mail implies a level of intimacy that you do not share with this student.

> *As much as I would love to be in your class tomorrow morning at 9:30 am, I also have the opportunity to be asleep in my own bed back home five hours away. I know I've missed class three times already, but I was wondering if there is any possibility of you looking the other way and not counting it against me if I left today instead of tomorrow to spend time with my lovely mother and sister and dog, CoCo. Thank you for considering this.*
> *From the Man in the Back of the Class,*
> *XXXX XXX :)*

You Decide: The student has a choice to make, and they e-mail you to let you make the choice for them. Thus, you bear the burden of the choice.

> *I went to the clinic on campus yesterday and had to go back again today because I wasn't getting better, and I have the flu. I attached the excuse that the Dr. wrote for me. I don't want to miss a lot in class, but if I am going to miss out on a lot then I will attend class, although the Dr. said I couldn't attend class for the rest of this week.*

Strategies for Maintaining Your Sanity via E-mail

We have all received these e-mails. So how should we address these types of communications? Here is a brief list of strategies for managing e-mail communications with students and some example responses.

Direct Instruction: We should include formal instruction on the characteristics of a professional e-mail in our courses. Such instruction could include showing students professional and unprofessional examples of the same e-mail communication as well as outlining requirements for e-mails to the professor, such as a requirement that first and last names should be included in any e-mail.

Model Professionalism: Consider student-instructor e-mail an opportunity for students to learn proper communication techniques and for you to model professional e-mail etiquette.

> *XXXXXXX,*
> *You may choose to go home instead of coming to class tomorrow. However, I will be counting absences as always. Please keep in mind that this will result in a 5 point deduction from your attendance grade.*
>
> *I hope that you have a nice weekend.*

Gentle Corrections for Egregious E-mails: Sometimes an e-mail may rise to the level at which a correction for the inappropriate e-mail content is in order.

In response to a recent e-mail in which the student had written IMPORTANT ADVISING! in the subject line and had sent the e-mail with highest importance:

> *XXXXXXX,*
> *I realize that you are concerned about getting registered. I have no intention of holding up this process for you, so I would like to get a meeting set up with you this week to discuss your schedule.*
>
> *I would like to point out a couple of things to you about e-mail. In the work world, we limit the use of the highest importance stamp for only a handful of extremely critical e-mails. It is similar to dialing 911 when there is a true emergency. Also, using all capital letters in an e-mail is the equivalent to screaming at someone, so you should not write in all capital letters in an e-mail.*
>
> *Let me know a date and time that you are available for an advising meeting this week.*
>
> *Sincerely,*
> *XXXXXXX*

Encourage Student Ownership: Instead of giving students the answers to their questions, tell them where they can go to find the answers to their questions.

> *The assignment due dates are on the syllabus. Our Blackboard site contains the study guide for the test. Please review both of these. If it is not on the study guide, then it will not be on the test.*

Professors Have Finite Capacity: Let students know when they can expect feedback and why the professor is unable to give the feedback in a quicker manner. Placing such limitations on the syllabus can also be helpful.

I grade forum posts once a day during the workweek because my evenings and weekends are times that I spend with my family. If your post is made after my daily grading during the workweek or on the weekend, I will get to it during my next weekday grading session.

Refer Out: This approach is typically used when the issues have risen to a university level and can no longer be handled at the classroom level.

The University has a process by which students can request a withdrawal from courses due to extenuating circumstances after the drop period has ended. You can find the policy and the forms for submitting such a request at the link below.

Put It In Perspective: Explain that a poor assignment grade is a small percentage of the overall grade and that there are plenty of opportunities to correct course throughout the rest of the semester.

Keep in mind that they are worth a total of 30 points out of 850 in the entire class. You can still do fine in the class.

Be Empathetic: Indicate that you understand how they feel, even though you are not going to change your decision.

No. I am not going to grade your assignment because you turned it in after the deadline and you did not negotiate a new deadline with me. I know that this is frustrating. You can still make a passing grade in the class.

Refer To The Syllabus: This approach is very useful because relying on policy is often an easy defense for instructors.

Please re-read the course policy on attendance in the syllabus.

End With Happy Note: This generally applies to all situations because the tone of a response can be considerably softened with a positive note.

I hope that you have a nice weekend.
Enjoy the sunshine today.

Take a Short Pause: By taking a deep breath and delaying a response for an hour or more, instructors can answer a message in a more objective matter and avoid escalating an issue.

They Will Ask Twice: While we do not advocate ignoring an e-mail outright as a matter of course, there are those rare times when no response is actually the best response. Some time might motivate students to address the issue on their own. If you receive a second e-mail, then you must respond.

Conclusion

E-mail communication with students is here to stay. Because of the asynchrony, depersonalization, and immediacy inherent in e-mail, we all experience our share of unprofessional student e-mail. It is important for us as faculty to understand that students are new to the world of professional e-mail and that they are likely to send e-mails with inappropriate content. As the recipients of these e-mails, we can minimize negative consequences by modeling professional e-mail etiquette and by having a set of strategies available to help us respond appropriately when unacceptable e-mail content comes our way. ●

References

Atamian, R. & DeMoville, W. (1998). Office hours-none. *College Teaching, 46,* 31–35.

Brink, T. L. (2001). Online teaching problems and solutions. *APS Observer, 14*(7). Retrieved March 10, 2011, from http://www.psychologicalscience.org/teaching/tips/tips_0901.cfm.

Brunner, B. R., Yates, B. L., Adams, J. W. (2008). Mass communication and journalism faculty and their electronic communication with college students: A nationwide examination. *Internet and Higher Education, 11,* 106 – 111.

Bushweller, K. (2005). Got mail? *Teacher Magazine, 17*(3), 49.

Duran, R. L., Kelly, L., & Keaten, J. A. (2005). College faculty use and perceptions of electronic mail to communicate with students. *Communication Quarterly, 53*(2), 159–176.

Dyer, R., Green, R., Pitts, M., & Millward, G. (1995). What's the flaming problem? — deindividuation or disinhibiting? In M.A.R. Kirby, A. J. Dix, & J. E. Finlay (Eds.). *People and computers* (x). New York, NY: Cambridge University Press.

Garton, L., & Wellman, B. (1995). Social impacts of electronic mail in organizations: A review of the research literature. In B. R. Burleson (Ed.). *Communication Yearbook* (18). Thousand Oaks, CA: Sage.

Gatz, L., & Hirt, J. (2000). Academic and social integration in cyberspace: Students and e-mail. *The Review of Higher Education*, *23*(3), 299-318.

Haworth, B. (1999). An analysis of the determinants of student e-mail use. *Journal of Education for Business, 75,* 55-60.

Hiltz, S. R. & Turoff, M. (1986). *The Network Nation.* Reading, MA: Addison-Wesley.

Hollingshead, A. B., McGrath, J. E., & O'Conner, K. M. (1993). Group task performance and communication technology: A longitudinal study of computer mediated versus face-to-face work groups. *Small Group Research, 24*, 307-333.

Jones, S. (2002). The internet goes to college: How students are living in the future with today's technology. *Pew Internet and American Life Project.* Retrieved March 2011 from http://www.pewinternet.org/~/media/Files/Reports/2002/PIP_College_Report.pdf.pdf

Kato, Y., Kato, S., & Akahori, K. (2007). Effects of emotional cues transmitted in e-mail communication on the emotions experienced by senders and receivers. *Computers in Human Behavior, 23,* 1894–1905.

Kitsantas, A. & Chow, A. (2007). College students' perceived threat and preference for seeking help in traditional, distributed, and distance learning environments. *Computers and Education, 48,* 383-395.

Sheer, V. C. & Fung, T. K. (2007). Can e-mail communication enhance professor-student relationship and student evaluation of professor?: Some empirical evidence. *Journal of Educational Computing Research, 37*(3), 289-306.

Sproull, L., & Kiesler, S. (1986). Reducing social context cues: Electronic mail in organizational communication. *Management Science, 32,* 1492 –1512.

A Recommended Dose of Psychopharmacology

By Andrew S. Sage

Despite the prominence of drugs in society, both illicit and prescribed, psychopharmacology — a hybrid discipline of psychological science and pharmacology — remains surprisingly obscure to people outside the discipline. Training in psychopharmacology is typically represented in academia either as a distinct program within a department or as an advisor-mediated research focus within a larger discipline. Although many students of psychopharmacology follow a pre-clinical track (i.e., working with animal models rather than human participants), there are programs in clinical psychopharmacology that focus more on evaluating novel pharmacotherapies in human populations. As with the wide range of training programs, the job market for a student of psychopharmacology is equally diverse. Employment can be found in research, teaching, drug development, consultation, sales, and many other fields.

The history of psychopharmacology is closely tied to its parent discipline, pharmacology, which was started in America by John Jacob Abel at the University of Michigan in 1890. Formal investigations of psychopharmacological questions began in the early 1950s, setting the foundation for the widespread use of psychoactive drugs in medical settings. In 1954, chlorpromazine (marketed as Thorazine in the United States) was the first psychoactive drug used in clinical trials to treat schizophrenia. Chlorpromazine, similar to many antipsychotic medications on today's market, had side effects, and researchers soon discovered alternative compounds with greater clinical efficacy. Unfortunately for many participants, these early days of drug development were largely unregulated, and volunteering for clinical trials was often a "participants-beware" situation. This trend in clinical trials changed in the early 1960s when reports documented frequent and severe birth defects (e.g., missing limbs) in children born to mothers who had taken thalidomide, which was a drug ironically marketed as a remedy for morning sickness. Because of the horrific side effects of thalidomide, the *Kefauver Harris Amendment* was added to the *Federal Food, Drug, and Cosmetic Act (1960)* in 1962, which increased the standards of efficacy and safety testing for new drugs. The FDA is now proactive rather than reactive with regard to new drug development, and the agency carefully scrutinizes attempts to bring new drugs to market.

Prior to discussing the therapeutic value, clinical application, or use of psychoactive drugs, a psychopharmacologist is primarily concerned with two fundamental principles. The first, *pharmacokinetics*, involves understanding how a particular drug is absorbed, distributed, metabolized, and excreted by the human body. A given drug may have multiple pharmacokinetic profiles that depend on its preparation (e.g., solution, tablet) and route of administration (e.g., inhalation, injection, ingestion). The second principle, *pharmacodynamics*, refers to the interaction of a drug with various receptors, enzymes, or other sites of action. Understanding the pharmacokinetic and pharmacodynamic principles of drug action is necessary to create and test hypotheses concerning the behavioral and psychological effects of a drug of interest. Thus, there are a few basic steps most psychopharmacological investigations will follow. First, a drug of interest must be chosen. Known drugs can be screened for potentially valuable and unidentified therapeutic effects, but novel drugs may also be synthesized. Second, the drug of interest is evaluated for a hypothesized effect (e.g., change in observable behavior or mood via self-report) alone and in the presence of other drugs (e.g., antagonists and agonists) known to target specific receptors or pathways to confirm the drug's efficacy and site of action. Although the end stage of drug research and development is largely the treatment of human disease, nearly all of the initial neurological, behavioral, and toxicological data are obtained through animal studies. If a drug appears to have substantial therapeutic value, it may be moved onto human clinical trials in which more extensive and diverse applications are tested. Clinical studies might also include a treatment group that receives a known therapeutic (a positive control), because in some cases (e.g., treating syphilis), it may not be ethical to provide one group with no treatment or a placebo.

Psychopharmacology is a part of many large research programs found in universities, government labs, and pharmaceutical companies around the world. More often than not, a psychopharmacologist will be one member of an interdisciplinary research team. For example, in a large-scale study of Alzheimer's disease, there may very well be simultaneous investigations of cell, animal, and human models of the disease. A microbiologist might examine the development of Aβ-plaques (i.e., the plaques that form in the brains of Alzheimer's patients) in cell cultures; a biochemist might synthesize novel drugs that reduce Aβ-plaques in cell cultures; a geneticist might work to develop an animal

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model of Alzheimer's disease; and a psychopharmacologist might administer the drugs synthesized by the biochemist to the animal model and examine behavioral (in vivo) as well as neurological (postmortem) differences between drug-treated and control animals. Drugs found to be effective in the animal model may then be passed on to a clinical psychopharmacologist for cognitive and behavioral testing in human Alzheimer's patients. In this translational pathway from petri dish to animal science to human medicine, psychopharmacologists play a vital role.

The future of psychopharmacology is bright. The advent of new technologies (e.g., highly specific drugs, transgenic animal models, imaging techniques) and methodologies (e.g., genetic screening, combination therapies, interdisciplinary approaches) will undoubtedly increase the rate at which science generally, and psychological science specifically, is able to unravel the mysteries of the human condition. While the field of psychopharmacology is unlikely to ever wholly merge with another field, training in psychopharmacology can complement any research orientation. With sufficient interest and training, subspecialists such as a developmental-, cognitive-, social-, or personality-psychopharmacologists could arise. As the future unfolds, pre-clinical and clinical psychopharmacologists will continue to play pivotal roles in the translation of animal science to human medicine, psychoactive drugs will continue to be refined in terms of their target specificity — leading to simultaneous increases in therapeutic effects and decreases in side effects — and the treatment of diseases both somatic and psychological will be facilitated by advancing genetic medicine. Ideally, parallel advances in the rate of discovery, manufacture, and distribution of therapeutic drugs will result in cheaper and more efficient drug delivery, allowing a greater number of people to take full advantage of psychopharmacological discoveries. ●

Suggested Reading

Bettica, P., Nucci, G., Pyke, C., Squassante, L., Zamuner, S., Ratti, E., Gomeni, R., & Alexander, R. (2011). Phase I studies on the safety, tolerability, pharmacokinetics and pharmacodynamics of SB-649868, a novel dual orexin receptor antagonist. *Journal of Psychopharmacology*, 1-13. DOI: 10.1177/0269881111408954

Boehmler, W., Petko, J., Woll, M., Frey, C., Thisse, B., Thisse, C., Canfield, V. A., & Levenson, R. (2010). Identification of zebrafish A2 adenosine receptors and expression in developing embryos. *Gene Expression Patterns, 9*(3), 144-151.

Greenblat, D. J., Harmatz, J. S., & Shader, R. I. (2011). Psychotropic drug prescribing in the United States: Extent, costs, and expenditures. *Journal of Clinical Psychopharmacology, 31*(1), 1-3. (editorial)

MacLean, K. A., Johnson, M. W., & Griffiths, R. R. (2011). Mystical experiences occasioned by the hallucinogen psilocybin lead to increases in the personality domain of openness. *Journal of Psychopharmacology,* 1-9.

Rubin, R. P. (2007). A brief history of great discoveries in pharmacology: In celebration of the centennial anniversary of the founding of the American society of pharmacology and experimental therapeutics. *Pharmacological Reviews, 59*(4), 289-359.

Ruehle, S., Rey, A. A., Remmers, F., & Lutz, B. (2011). The endocannabinoid system in anxiety, fear memory and habituation. *Journal of Psychopharmacology*, 1-17.

Salzman, C., Glick, I., & Keshavan, M. S. (2010). The sins of psychopharmacology. *Journal of Clinical Psychopharmacology, 30*(6), 653-655. (editorial)

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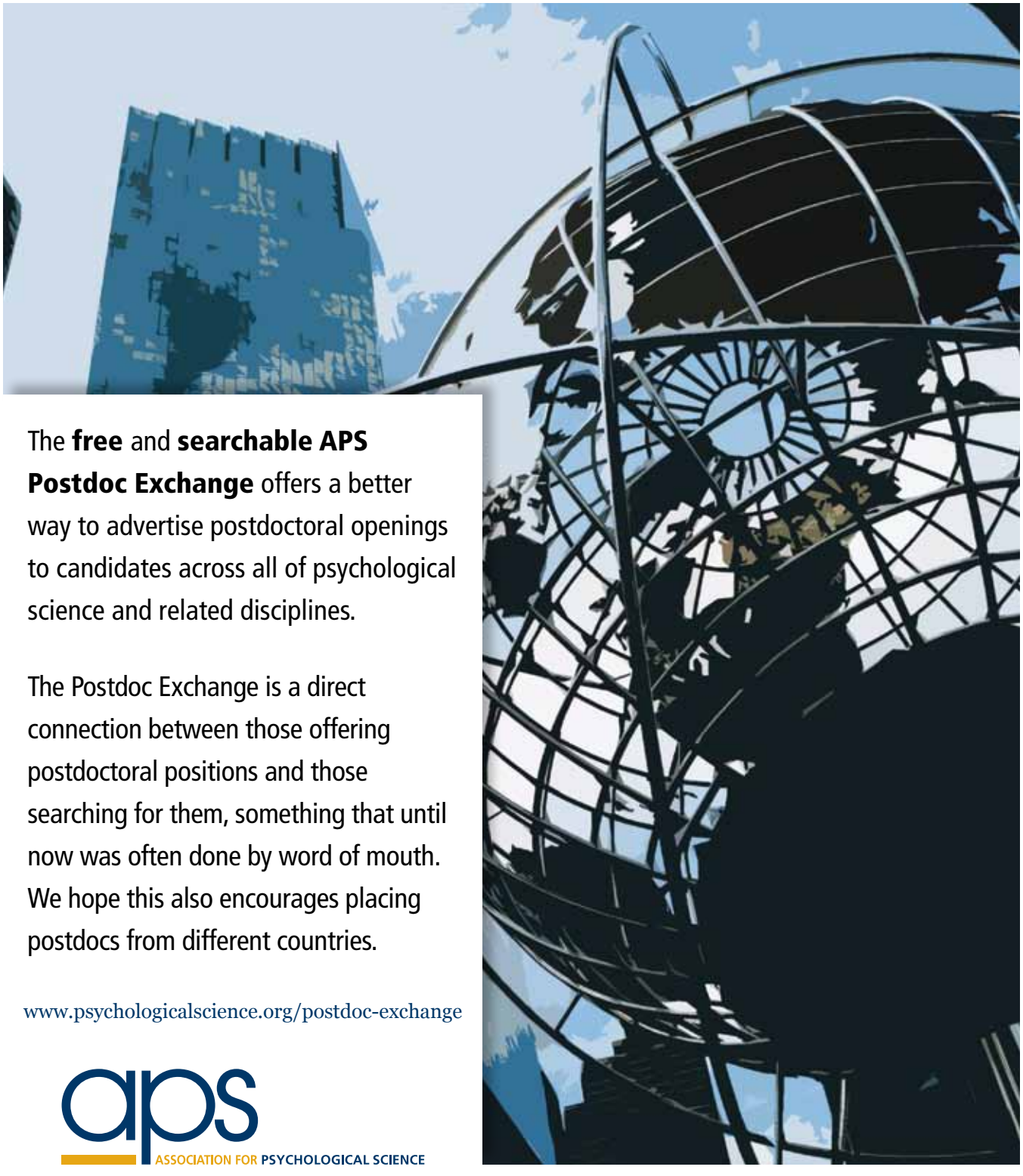

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Teresa Amabile, Harvard Business School, *The New York Times*, March 23, 2012: Praise Is Fleeting, but Brickbats We Recall; *The Washington Post*, March 6, 2012: How to Completely, Utterly Destroy an Employee's Work Life.

Roy Baumeister, Florida State University, *The New York Times*, March 23, 2012: Praise Is Fleeting, but Brickbats We Recall.

Praise Is Fleeting, but Brickbats We Recall

If you remember bad times more easily than good ones, you're not alone. Processing bad emotions requires more thinking, which leads to rumination and memories that pack a punch.

The New York Times

March 23, 2012

Neil Brewer, Flinders University, *Belgium Express*, March 9, 2012: Identification de Suspects: comment améliorer l'efficacité de la traditionnelle line-up?

Daryl Cameron, University of North Carolina at Chapel Hill, *The Baltimore Sun*, March 18, 2012: Cash, Compassion and Morality; *The Huffington Post*, March 17, 2012: Lack of Compassion Can Make People Feel Less Moral, Study Shows.

Promothesh Chatterjee, University of Kansas, *The Huffington Post*, March 19, 2012: Throwing Light on the Dark Side.

Wen-Bin Chiou, Sun Yat-Sen University, *Scientific American*, March 8, 2012: Virtuous Behaviors Sanction Later Sins.

Richard Davidson, University of Wisconsin-Madison, *ABC*, March 27, 2012: Daydream Believers: Scientists Ask Why Our Minds Wander; *CBC News*, March 17, 2012, Does Your Mind Wander While Performing Daily Tasks?

Geraldine Dawson, Autism Speaks and University of North Carolina, *Today Show*, March 30, 2012: Today Show Discusses Autism.

Thomas Denson, University of New South Wales, *ABC Radio Brisbane*, March 12, 2012: Change Your Hand, Change Your Mood!

Michelle Duguid, Washington University, *Netdoktor Magazin*, March 16, 2012: Größenwahn: Macht verzerrt die Selbstwahrnehmung.

Paul Eastwick, Texas A&M University, *The Huffington Post*, February 28, 2012: Red Dress Effect: Women in Red Deemed Open to Sexual Advances, Study of Men Shows.

Phoebe Ellsworth, University of Michigan, *The Huffington Post*, March 23, 2012: Shivering Liberals, Parched Conservatives; *The Huffington Post*, March 7, 2012: The Last Piece of Chocolate You Eat Is the Best, Says Study.

Amanda Forest, University of Waterloo, *NPR*, March 26, 2012: Facebook May Not Be So Friendly for Those With Low Self-Esteem.

Daniel Gilbert, Harvard University, *U. S. News & World Report*, March 9, 2012: 13 Fool-Proof Ways to Get Happier.

Heidi Grant, Lehigh University, *CNN Health*, March 22, 2012: 5 Habits of Highly Successful Dieters.

Dawson Discusses Autism on Today

One in 88 children has autism, says a new report from the Centers for Disease Control and Prevention. But Geraldine Dawson, Chief Science Officer at Autism Speaks, says that better diagnostic techniques can't entirely explain the 78% increase over the past decade. Dawson told the Today Show that the US must address autism through research, better diagnosis, and early interventions.

Dawson will give a James McKeen Cattell Fellow Award Address at the 24th APS Annual Convention in Chicago on Friday May 25 at 1:00 PM.

TODAY

March 30, 2012

Janet Hyde, University of Wisconsin-Madison, *MSNBC*, March 15, 2012: Women React to Rush's Apology: Not Accepted?

Todd Kashdan, George Mason, *U.S. News & World Report*, March 9, 2012: 13 Fool-Proof Ways to Get Happier.

Your Brain on Fiction

Events that we read about and ones that actually happen to us may not be so different as far as the brain is concerned. Psychological scientists have found a neural overlap between reading about social encounters and experiencing them. Thus, fiction may help us develop a "theory of mind" that can help us interact with others by improving our understanding of others' thoughts, feelings, and intentions.

The New York Times

March 17, 2012

Nadine Kaslow, Emory University, *The Washington Post*, March 7, 2012: Girls Asking, 'Am I Pretty?' in Online Videos Face Thousands of Vitriolic Responses.

Jessica Lakin, Drew University, *The New York Times*, March 13, 2012: What Happened to the Girls in Le Roy.

David Levitsky, Cornell University, *USA Today*, March 7, 2012: Still Hungry? More Americans Are Having a 'Second Breakfast.'

George Loewenstein, Carnegie Mellon University, *The Washington Post*, April 2, 2012: $1 at a Time, Americans Wager Nearly $1.5 Billion on Longest of Shots to Become a Millionaire.

Sonja Lyubomirsky, University of California, Riverside, *The Columbus Dispatch*, March 22, 2012: Kindness Rewards the Giver, Too; *U.S. News & World Report*, March 9, 2012: 13 Fool-Proof Ways to Get Happier.

Raymond Mar, York University, *The New York Times*, March 17, 2012: Your Brain on Fiction.

Nina Mazar, University of Toronto, *Examiner*, March 9, 2012: Celebrity Psychology: Amanda Bynes Drives Away From Police; *Scientific American*, March 8, 2012: Virtuous Behaviors Sanction Later Sins.

Anthony McCaffrey, University of Massachusetts Amherst, *San Francisco Chronicle*, March 14, 2012: Problem Solving in a Doggy Age; *La Repubblica*, February 25, 2012: 'La creatività? Basta allenarsi' Il talento non è indispensabile; *Asian News International*, March 9, 2012: Now, Seek the Obscure to Solve Your Problems.

Cassie Mogilner, University of Pennsylvania, *The Huffington Post*, March 29, 2012: Real Good for Free: the Paradox of Leisure Time.

Leif Nelson, University of California, Berkeley, *The Chronicle of Higher Education*, March 15, 2012: The Bad Science Reporting Effect.

Keith Oatley, University of Toronto, *The New York Times*, March 17, 2012: Your Brain on Fiction.

Adam Pazda, University of Rochester, *The Huffington Post*, February 28, 2012: Red Dress Effect: Women in Red Deemed Open to Sexual Advances, Study of Men Shows.

Carolyn Palmquist, University of Virginia, *Men's Health*, March 15, 2012: 3 Parenting Dilemmas SOLVED.

Wat u over uw ziekte denkt, is belangrijk voor uw genezing

(What You Think About Your Illness Is Important for Your Healing)

How patients think about their illnesses may be just as important as the treatment they receive. Recent research suggests that doctors should ask patients what they think about the diagnoses they're facing so that doctors can correct inaccurate perceptions that might interfere with a patient's recovery.

De Standaard

March 6, 2012

Keith Petrie, University of Auckland, *De Standaard*, March 6, 2012: Wat u over uw ziekte denkt, is belangrijk voor uw genezing.

Dennis Proffitt, University of Virginia, *The Washington Post*, March 23, 2012: Context for Fla. Shooting? Study Finds Holding Gun Makes You Likely to Think Others Have Guns.

Harry Reis, University of Rochester, *Austrian Broadcasting Network*, March 14, 2012: Partnersuche: Amor ist online.

MEMBERS *in the news*

Evan Risko, Arizona State University, *The Washington Post*, March 23, 2012: Context for Fla. Shooting? Study Finds Holding Gun Makes You Likely to Think Others Have Guns.

Joseph Simmons, University of Pennsylvania, *The Chronicle of Higher Education*, March 15, 2012: The Bad Science Reporting Effect.

Uri Simonsohn, University of Pennsylvania, *The Chronicle of Higher Education*, March 15, 2012: The Bad Science Reporting Effect.

More members in the news online at

www.psychologicalscience.org/MembersInTheNews

Jonathan Smallwood, Max Planck Institute Leipzig, *CBC News*, March 17, 2012: Does Your Mind Wander While Performing Daily Tasks?; *The Telegraph*, March 19, 2012: Children Whose Minds Wander 'Have Sharper Brains.'

Miguel Unzueta, University of California, Los Angeles, *The Atlantic*, March 27, 2012: Study of the Day: 'Diversity' Has Become a Useless Concept.

Adam Waytz, Northwestern University, *El Economista*, March 22, 2012: La deshumanización de la medicina moderna.

Joanne Wood, University of Waterloo, *NPR*, March 26, 2012: Facebook May Not Be So Friendly for Those With Low Self-Esteem.

Coverage of research from an APS journal

Podcast included in coverage

Video included in coverage

APS Convention Speaker

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Featured Listing

Penn State Brandywine

Health & Human Development **Assistant Professor of HDFS**

Penn State Brandywine, a campus of The Pennsylvania State University, invites applications for tenure track Assistant Professor of Human Development and Family Studies (HDFS). Start August 2012 or as negotiated. Responsibilities: Teach introductory and upper-division undergraduate courses in HDFS. Conduct research, publish in refereed journals, participate in service activities. Qualifications: Ph.D. in Human Development and Family Studies or related discipline. Preference will be given to applicants whose research and teaching interests focus on interpersonal or intercultural communications and relationships within peer, family, or community contexts. To learn more about the campus and Penn State, visit http://222.psu.edu/ur/cmpcoll.html. To learn more about the position and how to apply, visit http://www/psu.jobs/Search/Opportunities; follow "Faculty" link. Application review begins April 16, 2012. AA/EOE. **PA01**

The APS Employment Network is your connection to the best jobs in psychological science. Employers from colleges and universities, government, and the private sector use the APS Employment Network to recruit candidates like you. And there is more to the APS Employment Network than these pages. Employers are increasingly relying on web-only listings and the APS Employment Network is on the leading edge of that trend. Visit www.psychologicalscience.org/jobs for additional job postings.

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SUBJECT AREA INDEX

Behavioral	Family Studies
IA01	PA01
Cognitive	**Management**
GA01	CA01

For more employment ads go to ***psychologicalscience.org/jobs***

CALIFORNIA

University of California **Merced Management** **Visiting Assistant Professor**
The Ernest & Julio Gallo Management Program at the University of California Merced invites applications for visiting assistant professor positions in all areas of Management: accounting, entrepreneurship, organizational behavior, strategy, finance, marketing, information systems, and operations management. Candidates with demonstrated excellence in scholarship and teaching, and a Ph.D. in one of the academic areas of management, or a closely related field, are especially encouraged to apply at the following link: http://jobs.ucmerced.edu/view_academic_position.faces?positionId=3823_CA01

GEORGIA

Georgia Institute of Technology **Psychology** **Postdoctoral Fellowships**
The Cognitive Aging Program in the School of Psychology at the Georgia Institute of Technology has one opening for a postdoctoral Fellowship on our NIH-sponsored Ruth L. Kirschstein training grant starting as early as May 1, 2012. A later starting date is negotiable. The duration of the traineeship is between 1 and 3 years. Postdoctoral trainees work with core faculty members with research interests in adult cognitive development, including: Audrey Duarte – neuroscience of memory; Arthur D. Fisk - attention, human factors, applied cognition; Christopher Hertzog - memory, metacognition, intelligence; Scott Moffat – spatial navigation, stress, hormonal influences on cognition; Wendy A. Rogers - human factors, applied cognition, attention and learning; Anderson D. Smith - episodic memory, animal models; Daniel H. Spieler - attention, language processing, modeling; Paul Verhaeghen – attention, speed of processing, working memory. There are also other faculty members affiliated with our training program who can collaborate with postdoctoral fellows. Stipend levels are set by the federal government and increase with years of postdoctoral experience. The traineeship also provides each trainee with travel funds, an allowance for research expenses, and an allowance for health insurance. Fellowships are restricted to U.S. citizens or permanent U. S. residents. Applicants should have a completed a Ph.D. in psychology or a related discipline (e.g., cognitive neuroscience). To apply, please send a c. v., a statement of research interests identifying possible matches to at least one core faculty mentor, and representative publications to Christopher Hertzog; School of Psychology; Georgia Institute of Technology; Atlanta, GA 30332-0170 or as an email attachment to christopher.hertzog@psych.gatech.edu. Please also arrange to have three letters of reference sent separately to Dr. Hertzog, but list names and contact information for your referees in the application cover letter. Applications received by April 1, 2012 have the best chance of being reviewed for available fellowships, but applications will be accepted and reviewed until the positions are filled. Applications from members of ethnic and racial minorities are strongly encouraged. Georgia Institute of Technology is a unit of the University System of Georgia and is an Affirmative Action/Equal Opportunity Employer. **GA01**

IOWA

University of Iowa **Neurology** **Cognitive Neuroscientist**
The Department of Neurology at the University of Iowa seeks an MD, PhD, or MD/PhD clinician/scientist with expertise in neuropsychology and cognitive neuroscience, for a tenure track position at a rank commensurate with experience. The applicant must have familiarity with clinical and experimental neuropsychology and behavioral neurology research. Experience with modern cognitive neuroscience approaches such as functional neuroimaging is desirable. The successful candidate will have a well-established record of independent, creative, and outstanding research productivity, demonstrated by publications in top-tier general and specialty journals, and extramural funding, or clear evidence of promise of such a record. The candidate must be able to demonstrate knowledge of effective strategies for working with diverse faculty, staff, and students and be able to demonstrate job-related experience with and/or commitment to diversity in the work/academic environment. **IA01**

PENNSYLVANIA

Penn State Brandywine **Health & Human Development** **Assistant Professor of HDFS**
Penn State Brandywine, a campus of The Pennsylvania State University, invites applications for tenure track Assistant Professor of Human Development and Family Studies (HDFS). Start August 2012 or as negotiated. Responsibilities: Teach introductory and upper-division undergraduate courses in HDFS. Conduct research, publish in refereed journals, participate in service activities. Qualifications: Ph.D. in Human Development and Family Studies or related discipline. Preference will be given to applicants whose research and teaching interests focus on interpersonal or intercultural communications and relationships within peer, family, or community contexts. To learn more about the campus and Penn State, visit http://222.psu.edu/ur/cmpocoll.html. To learn more about the position and how to apply, visit http://www/psu.jobs/Search/Opportunities.html; follow "Faculty" link. Application review begins April 16, 2012. AA/EOE. **PA01**

APS Science Writing Internship

The Association for Psychological Science is seeking candidates for a science writing internship. Candidates must have a college degree, preferably in psychology (or a related scientific discipline), journalism, or communications; strong writing skills; and an interest in communicating behavioral science to the general public. Among other things, activities include reading scientific publications, interviewing scientists and translating studies into jargon-free English; and contributing to the APS website. The ideal candidate will be considering public outreach as a career option. The internship start and length is flexible. This position has a stipend of $1200 per month.

Please send a letter of intent and a brief resume to:

Martha Heil, Director of News
mheil@psychologicalscience.org

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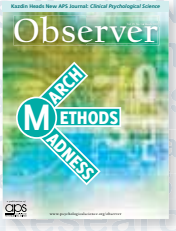

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Membership

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ANNOUNCEMENTS

Send items to apsobserver@psychologicalscience.org

MEETINGS

16th International Conference on Cognitive and Neural Systems (ICCNS)
May 30 – June 1, 2012
Boston, MA
http://cns.bu.edu/cns-meeting/conference.html

International Behavioral Neuroscience Society 21st Annual Meeting
June 5 – 10, 2012
Kailua-Kona, HI
www.ibnshomepage.org/annualmtg12.htm

"The Cognitive Neuroscience of Personality Dynamics" A precoference symposium consponsored by:

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July 10, 2012
European Association of Personality Psychology
16th European Conference on Personality (ECP16)
July 10 – 14
Trieste, Italy
www.eapa-homepage.org/upcoming/?id=200

International Association for Cross-Cultural Psychology 21st International Congress
July 17 – 21, 2012
Stellenbosch, South Africa
www.iaccp2012southafrica.co.za/

30th International Congress of Psychology: Psychology Serving Humanity
July 22 – 27, 2012
Cape Town, South Africa
www.icp2012.com/index.php?bodyhtml=home.html

Embodied and Situated Language Processing 2012
August 28 – 30, 2012
Newcastle, UK
http://eslp.cocolab.org/

GRANTS

NIA Grants for Social Neuroscience and Neuroeconomics of Aging
The National Institute on Aging (NIA) has two funding opportunities for research on social neuroscience and neuroeconomics of aging. Deadlines range from May 7, 2012 – May 7, 2014.
http://grants.nih.gov/grants/guide/pa-files/PAR-11-337.html
http://grants.nih.gov/grants/guide/pa-files/PAR-11-336.html

Lizette Peterson-Homer Memorial Injury Research Grant
The Lizette Peterson-Homer Memorial Injury Research Grant provides up to $5,000 for one year for research to increase understanding of the nature and etiology of injuries in children; develop and evaluate intervention techniques in this area; and/or disseminate and implement proven techniques in this area. Completed applications should be submitted by October 1, 2012.
http://www.apa.org/apf/funding/peterson-homer.aspx

CALL FOR PAPERS

Special Issue of *Early Education and Development*
The goal of the special issue *Social and Emotional Learning in Early Education* is to explore more deeply the role of social and emotional learning in the development of 3- to 6-year-olds and programming efforts in classroom settings. Susan E. Rivers & Marc A. Brackett will be guest editors. The submission deadline is June 1, 2012.
www.tandfonline.com/doi/abs/10.1080/10409289.2011.628606

Emotional Expression: The Brain and The Face
Armindo Freitas-Magalhaes, PhD, is in the process of preparing the edited volume entitled "*Emotional Expression: The Brain and The Face*" (V. 5, Studies in Brain, Face and Emotion Series). If your area of research fits in well in this edited volume, and you have a paper of interest for this book, we invite you to submit a paper for consideration (theoretical or research) on your area of research. The submissions deadline is July 31, 2012. For more information contact Érico Castro (University Fernando Pessoa Health Sciences School) at feelab@ufp.edu.pt.

MEETINGS (CONTD)

5th FPR-UCLA Interdisciplinary Conference: Culture, Mind, and Brain: Emerging Concepts, Methods, Applications
October 19 – 20, 2012
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www.thefpr.org/conference2012/index.php

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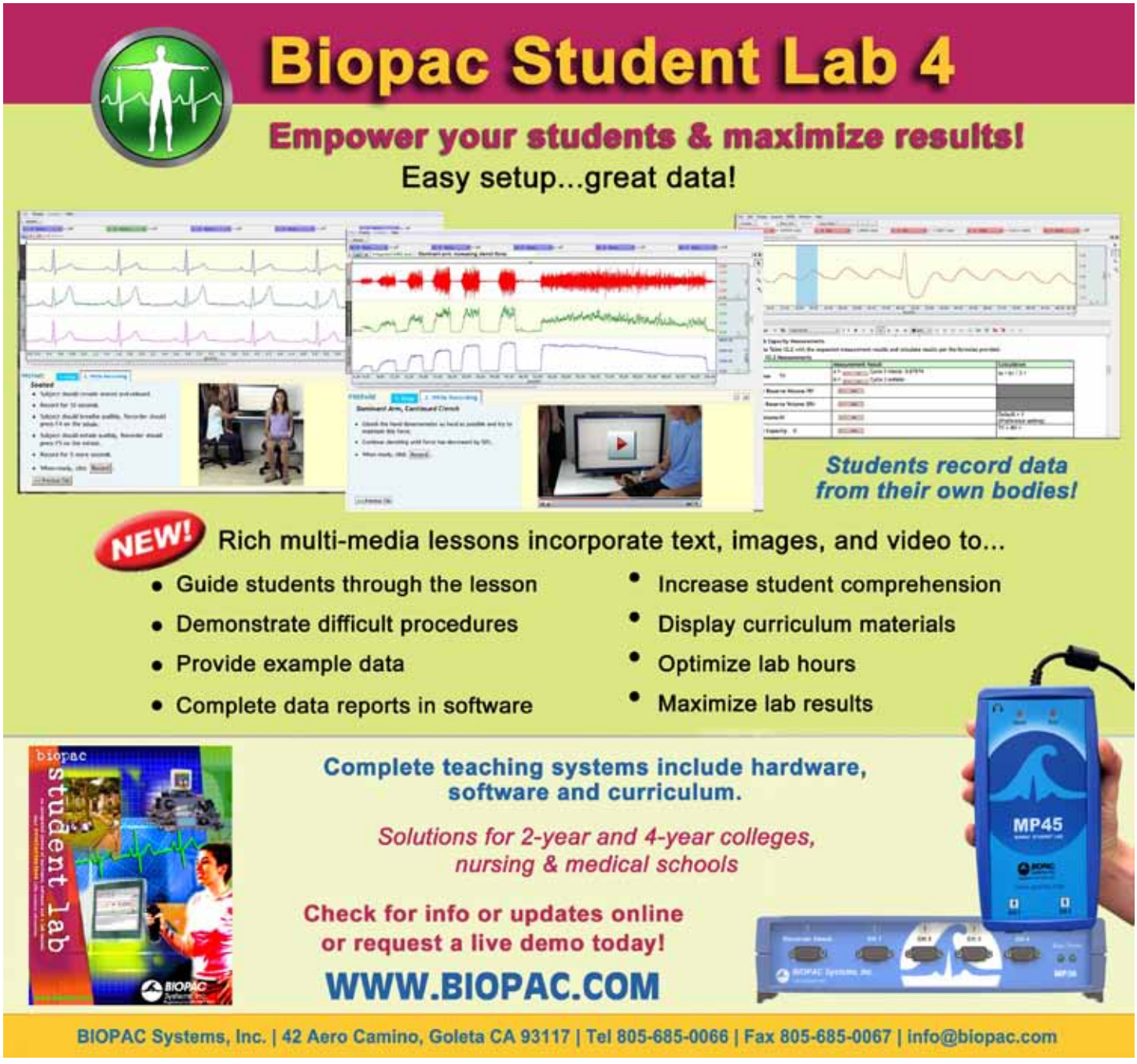
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