

# The Psychological Science Agenda



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## Annual Appropriations Testimonies Begin on Capitol Hill

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

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Spring in Washington ushers in both cherry blossoms and the annual appropriations process on Capitol Hill. As part of this yearly congressional rite, all of the subcommittees of the two House and Senate Appropriations Committees begin "marking up" bills to fund federal agencies for the next fiscal year (FY05), which begins on October 1. Following release of the President's budget request in early February, the Budget Committees in both houses allocate lump sums to each



**Merry Bullock testifies before the House VA-HUD Appropriations Subcommittee**

Appropriations Subcommittee, out of which each must fund all of the agencies within its jurisdiction. Throughout the spring (and often summer) months, members of these influential subcommittees and their staff have a number of formal and informal meetings with federal agency staff, other interested members of Congress, and in some cases, outside groups to gather funding and programmatic recommendations.

The House and Senate Subcommittees on VA, HUD and Independent Agen-

cies (known colloquially as "VA-HUD") are responsible for appropriating funds to the National Science Foundation (NSF), the National Aeronautics and Space Administration (NASA), and the Department of Veterans Affairs (VA), in addition to the huge Department of Housing and Urban Development and a

host of smaller agencies. Both House and Senate VA-HUD Subcommittees hold formal hearings to which the heads of the agencies are invited, and Members of Congress take turns asking questions of the agency directors on the record. In

addition, the House VA-HUD Subcommittee holds what is known as "public witness testimony," for which outside groups (including associations, coalitions, etc.) request and are given slots for representatives to appear before the Subcommittee. Because NSF, NASA and the VA provide grant funding to psychological researchers, APA's Public Policy Office is a strong, active player in the VA-HUD appropriations process and each year requests one of the five-minute public witness testimony slots.

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On March 25th, APA's then Acting Executive Director for Science, Merry Bullock, testified before the House VA-HUD Appropriations Subcommittee (click here to view the Subcommittee's website). APA's testimony (view the full written testimony at: <http://www.apa.org/ppo/issues/svadhudwritten04.html>) highlighted concerns about the Administration budget request for psychological research within each of these agencies.

2 APA and the larger Coalition for National Science Funding urged the Subcommittee to increase both the overall funding for NSF and the line item support for the special research priority in the Social, Behavioral and Economic Sciences ("Human and Social Dynamics"), over and above the President's request. At NASA, the Administration's request for both the Office of Biological and Physical Research and the Office of Aero-Space Technology appears adequate, but APA provided concrete suggestions for strengthening psychological and human factors research programs in each. The VA's research budget was actually cut in the President's request, and APA and a veterans' medical care and research coalition made a forceful case for congressional intervention to restore these funds. Across agencies, Bullock stressed the need for continued, strong investment in human-centered research, even given the current climate of tight budgetary constraints on discretionary spending and a host of competing needs.

APA's CEO, Norman Anderson, will testify later this month before the House Appropriations Subcommittee that directs funds, within the Department of Health and Human Services to the National Institutes of Health, the Centers for Disease Control, and a variety of other health agencies as well as the Department of Education. We are still waiting to hear if APA will be granted a public witness testimony slot before the Senate Appropriations Subcommittee on Defense in early May.

Public witness testimony is one of many advocacy strategies the Public Policy Of-

fice staff put into action during the often frenzied appropriations process. For those Subcommittees that do not conduct public witness hearings, APA submits written testimony to subcommittees for inclusion in their deliberations.

We also conduct numerous "Hill visits," (meetings with staff and/or Members of Congress) alone or in conjunction with various coalitions; we bring in psychological researchers to testify at topical hearings before Congress and present at APA-sponsored congressional briefings; we sponsor scientists who showcase their research during lobby day research exhibitions; we train groups of psychologists in advocacy and arrange for them to meet with their congressional delegations here in Washington as well as back at home; and we activate our grassroots to call Congress when we need to garner support for (or ensure defeat of) a bill. We encourage all of our psychological scientists to keep up with these legislative issues through our monthly Science PPO e-newsletter, SPIN (Science Policy Insider News) and our PPO grassroots network, PPAAN (Public Policy Action Network). Sign up now and be a part of APA's science advocacy network in Washington! Visit <http://listserve.apa.org/cgi-bin/wa.exe?SUBED1=spin&A=1> for SPIN and <http://www.apa.org/ppo/forms/joinppan.html> for PPAAN. ■

## APA Invites Nominations for Distinguished Science Awards

The APA Board of Scientific Affairs (BSA) invites nominations for its ongoing awards program. Awards are given in three categories:

The Distinguished Scientific Contribution Award is presented to individuals who have made distinguished theoretical or empirical contributions to basic research in psychology.

The Distinguished Scientific Award for the Applications of Psychology is given to individuals who have made exceptional theoretical or empirical advances in psychology leading to the understanding or amelioration of important practical problems.

To submit a nomination for the Distinguished Scientific Contribution Award and the Distinguished Scientific Award for the Applications of Psychology, you should provide a letter of nomination, the nominee's current vita with list of publications, and the names and addresses of several scientists who are familiar with the nominee's work. The Distinguished Scientific Award for Early Career Contribution to Psychology is awarded to outstanding young psychologists who are 9 years or less post-PhD (1995 or later). The 2005 Early Career Awards will be given in the five areas:

- behavioral and cognitive neuroscience
- social
- perception, motor performance
- applied research (e.g., treatment and prevention research, industrial/organizational research, educational research)
- individual differences (e.g., personality, psychometrics, mental ability, behavioral genetics)

The categories should be interpreted broadly and are not meant to be exclusive; all areas of psychology are of sufficient merit to be considered for awards. To submit a nomination for the Distinguished Scientific Award for Early Career Contribution to Psychology, you should provide a letter of nomination, the nominee's current vita with list of publications, and up to five representative reprints.

To obtain nomination forms please visit: [www.apa.org/science/sciaward.html](http://www.apa.org/science/sciaward.html) or contact Suzanne Wandersman, Science Directorate, American Psychological Association, 750 First Street, NE, Washington, DC 20002; by phone, (202) 336-6000; by fax, (202) 336-5953; or by email to [swandersman@apa.org](mailto:swandersman@apa.org). The deadline for all award nominations is June 1, 2004. ■

# EXECUTIVE DIRECTOR'S COLUMN

STEVEN BRECKLER, Executive Director for Science

## Homecoming

I have a confession. I have not been faithful to APA. I blame myself. I got distracted by other societies which offered a focus in my own areas of interest, and I failed to understand or appreciate the true value of APA. We drifted apart. Over the years, I've grown, APA has grown, and I have come to realize that scientific psychology is fortunate to have APA by its side. I can't imagine a more attractive partner. I've come home, and I couldn't be happier.

In the early days, my membership in APA was a source of great pride and satisfaction. I joined when I was still an undergraduate at UC San Diego. It was 1979, and the "cognitive revolution" was gaining momentum. I still remember reading my first issues of *Psychological Review*. In that year's volume alone, Tversky and Sattath published their article on preference trees, Bentler and Speckart put a whole new spin on modeling attitude-behavior relations, John Anderson, Zenon Pylyshyn, and Frederick Hayes-Roth debated differences in theoretical models of mental imagery, and Jay McClelland developed the idea that components of an information-processing system all operate continuously. Wow, was I ever happy to be a part of all this and a member of APA!

I moved on to graduate school at Ohio State, and then to my first academic position at Johns Hopkins. During those years, my faith in APA remained strong and loyal. But it was the 1980s, and everyone knows what those days were like. Members of APA divisions were breaking away and establishing their own, independent societies. Whole new psychological societies were being created. Dissatisfaction among scientists in particular was growing, especially over having to share the same house with practitioners. I saw merit in many of the arguments, and I joined many of the new startups. It was exciting, but it was also



costly. I stopped paying my APA dues, only to rejoin when offered a dues amnesty. It is fair to say that the relationship was cooling.

My outlook started to change in 1995. That's when I left Johns Hopkins to be a program director at NSF. After more than a decade of staying sharply focused in one particular part of social psychology, I found myself responsible for funding grants that spanned all of social psychology. I felt like a student again, and enjoyed a renewed sense of awe with my own discipline. I was in my own scientific element, of course, and had a good sense of where social psychology fit in the general scheme of psychology. It was easy to be an advocate for social psychology, and I loved doing it. In the process, I gained a renewed faith for all of scientific psychology.

Still, I was not well-prepared for one thing, and it came as a real shock: psychology was not the only game in town. I always knew that other disciplines existed, and I even had a few friends who worked in them. But for me, psychology was the one and only true behavioral science. I was wrong, and it was costing us money. A lot of money. What I quickly learned at NSF was that other scientific disciplines laid claim to studying behavior, and that these disciplines demanded (and received) resources. Within the social and behavioral sciences, psychology was playing the game with economics,

sociology, political science, anthropology, and geography. Beyond the social and behavioral sciences, I saw how biology, computer science, engineering, and mathematics all offered perspective on the very same problems being addressed by psychology.

I learned two important lessons at NSF. One is that for every scientific discipline and sub-discipline, there exists a constituency that is represented by one or more professional societies. Early in my tenure at NSF, I remember a meeting with a delegation from APA. It was led by Bill Howell, who was APA's Executive Director for Science at the time. Bill was there as an ambassador for psychological science, to represent our interests and to offer our services. What I was only beginning to appreciate was that every other discipline did the same thing. Some – like APA – are better able to articulate the centrality and importance of their field; others are less persuasive. It makes a difference. The program I managed (social psychology) was originally created because of pressure brought to bear by APA and others. Throughout my time at NSF, the staff at APA was always there to support and promote the field. I was impressed, and I was reassured. My affection for APA was warming up.

The second lesson I learned is that the problems that occupy center stage in science right now are multifaceted and complex. Their solutions demand the perspectives and contributions of multiple scientific disciplines. For some of these problems, psychology is the center of focus, and for many others it supplies a critical piece of the puzzle. Yet, contributing to a multidisciplinary enterprise is difficult and challenging. Establishing a local collaboration is the easy part. Mobilizing the full force of the discipline is much harder. Students need to be trained and supported; venues must be created for interdisciplinary exchange

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...Executive Director's Column, continued from page 3

# Engineering and Military Psychology: Improving Lives and Enhancing National Security

by Paul Bartone, Division 19 President

of ideas, tools, and resources; results need to be explained in a way that can be understood by scientists who don't "speak the same language"; and new knowledge needs to be disseminated in the public interest. These are daunting tasks, but they are ones that can be fostered and encouraged by professional societies. I saw it often at NSF, and APA was among the very best at doing it. This must continue to be a high priority for the future.

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When I was offered the chance to be APA's Executive Director for Science, I jumped on the opportunity. I feel as though I am returning home, rediscovering my roots in psychological science, and joining an organization that can lead our science into the 21st century. I am glad that APA has welcomed me home. I hope that you will join me. ■

## Science Policy Insider News

### What is SPIN?

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

APA's Division 21 (Applied Experimental and Engineering Psychology) and Division 19 (Military Psychology) joined forces once again this year to host their mid-year scientific meeting, March 4 and 5 at historic Fort Belvoir, Virginia. The theme this year was Engineering and Military Psychology: Improving Lives and Enhancing National Security. More than 300 participants heard presentations and posters on the latest research and thinking in this area.

The symposium was also co-sponsored by the

Potomac Chapter of the Human Factors and Ergonomics Society.

As an important opportunity for both graduate and undergraduate psychology students to hear and interact with some of the top researchers in the field, participation was very strong, with multiple student papers from University of Central Florida, George Mason University, Old Dominion University, North Carolina State University, Catholic University, Aston University (United Kingdom), and the Naval Post-Graduate School. Cadets from the U.S. Air Force Academy and U.S. Military Academy-West Point contributed a total of 18 papers and posters. Attendees also heard APA Science and Policy updates from Heather Kelly, APA Senior Legislative and Federal Affairs Officer, and Dianne Maranto, APA Director of Psychology in the Workplace.

John Ruffner, Program Chair, expressed his appreciation for the high level of interest and cooperation amongst plan-

ners and participants in contributing to the symposium's success. Mike Matthews, co-chair for the 2004 meeting stated: "The number and quality of undergraduate and graduate papers was the best yet, the research presented by the human factors and military psychology professionals addressed state-of-the-art issues. We are also happy to see growing international interest in the conference." Conference attendees and participants included international scholars from Singapore and the United Kingdom.



Air Force Academy Cadets Matthew K. Linford and Gloria Moran accept their award for Best Undergraduate Paper from Division 19 President Paul Bartone.

Among the paper highlights was an analysis of safety signals used by the Department of Homeland Security,

by Christopher Mayhorn, Michael Wogalter, and Jennifer Bell of North Carolina State University. This exciting research represents the first empirical examination of the validity of these symbols. Also, Tim O'Neill, Matt Swiergosz, and Michael Matthews presented results of their research on a new camouflage pattern for Marine Corps vehicles, a technology that may substantially improve the survivability of such vehicles in combat.

Planning for next year's conference is already underway. A call for papers should be available on the Division 19 and the Division 21 websites by the first of October. For those who to know more about the conference, please contact the 2005 program co-chair, Michael Matthews, at 845-938-3696 or at [Mike.Matthews@usma.edu](mailto:Mike.Matthews@usma.edu). ■

## SCIENCE BRIEFS

## Tobacco Harm Reduction: The Need for Research to Inform Policy

by Dorothy K. Hatsukami and Mitch Zeller



**Dorothy Hatsukami, PhD**, is currently Professor of Psychiatry and Adjunct Professor of Psychology and of Epidemiology at the University of Minnesota, and Director of the Tobacco Use Research Programs. She has conducted research in the areas of nicotine addiction and treatment of nicotine addiction, among a general population of adult smokers as well as adolescents. She has also conducted research in the area of smokeless tobacco. She is currently a Principal Investigator of one of the seven NIH funded Transdisciplinary Tobacco Use Research Centers (TTURC). The research focus of this TTURC is on methods and understanding mechanism associated with reducing tobacco toxin exposure. She is a co-recipient of the Ove Ferno award for her research on to-

bacco dependence. Because of her expertise, she has served on a number of national committees including the National Advisory Council for Substance Abuse and Mental Health Services Administration, National Advisory Council on Drug Abuse, the Interagency Committee for Smoking and Health, Drug Control Research, Data, and Evaluation Committee for the Office of National Drug Control Policy, the Institute of Medicine and was on the Scientific Board of Counselors for the Intramural Research Program of NIDA. She has served on many advisory panels for other United States federal, non-profit and international organizations. She is a past President of the Society on Research on Nicotine and Tobacco and a past President of the College on Problems of Drug Dependence.



**Mitch Zeller, JD**, attended Dartmouth College in Hanover, New Hampshire and is a graduate of the American University Washington College of Law in Washington, D.C. From 1993 until June 2000, Zeller served as associate commissioner and director of the Food and Drug Administration's (FDA) Office of Tobacco Programs where he built the first nationwide program to reduce youth access to tobacco. He served as the FDA's representative on tobacco issues in all dealings with the Congress, federal and state agencies, public health groups and foreign governments. Zeller also served as an official U.S. delegate to the World Health Organization (WHO) Working Group for the Framework Convention on Tobacco Control.

Zeller has published papers in several leading medical and public health journals including the *New England Journal of Medicine*, and the *Journal of the American Medical Association*. In addition, he has won many awards for his work on tobacco, including the Secretary's Award for Distinguished Service and the National Public Affairs Special Recognition Award from the American Heart Association. Zeller also had the honor of being selected to travel to Moscow on behalf of President Bill Clinton to accept the "World No Tobacco Day" medal from the President of WHO in recognition of the Clinton Administration's groundbreaking work on tobacco. He is Vice President for Policy and Strategic Communications at Pinney Associates.

### What is Tobacco Harm Reduction?

**T**obacco use remains the leading preventable cause of death and disease in the United States (Mokdad, Marks, Stroup, & Gerberding, 2004). Most smokers are concerned about their health and have at least some interest in quitting (Centers for Disease Control and Prevention, 2002). Some tobacco companies, in an effort to keep smokers using tobacco products, now offer a new generation of tobacco-based products that claim to reduce exposure

and harm from the toxins in tobacco. The best advice for health concerned smokers has been and remains to quit. But what about smokers who, for whatever reason, are either unwilling or unable to quit completely? Tobacco harm reduction is the general term used to describe the scientific, policy, legal, and communications issues raised by products designed to continue tobacco use, albeit with products holding out the promise to reduce risk of tobacco-related disease.

Several types of "potential reduced exposure products" (PREPs) that contain tobacco have been on the market for several years (Stratton, Shetty, Wallace, & Bondurant, 2001). These PREPs include modified tobacco products that claim to reduce the levels of selected toxins. These claimed reductions are achieved by using different curing or fermentation processes, or adding chemicals, such as palladium, to the tobacco leaves (e.g., Advance and OMNI cigarettes, or Revel

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6 smokeless tobacco). Additionally, products bearing claims to significantly reduce nicotine levels have been developed by genetically engineering the tobacco plant (e.g., Quest). There are also products that are nicotine delivery devices that heat rather than burn tobacco, and which claim to reduce the levels of toxic combustion products (e.g., Eclipse, Accord). Finally, the use of oral non-combustible tobacco products in lieu of smoking has been proposed as a method of reducing health risks among cigarette smokers (e.g., Ariva, Exalt, Revel).

There are several significant public health concerns posed by tobacco-based products purporting to reduce harm. First, they are completely unregulated. Tobacco manufacturers are free to sell any products they desire and make any claims they wish. There is no independent scientific scrutiny of these reduced risk claims prior to their appearance in the marketplace. Second, consumer research demonstrates that these products constitute a significant threat to cessation efforts. Current smokers have a high degree of interest in these products, and falsely assume that these products dramatically reduce the risk of tobacco product use when compared to conventional cigarettes (Shiffman, Pillitteri, Burton, & Di Marino, 2004). The state of the harm reduction science is in its infancy and the tobacco companies do not know if products that reduce exposure to toxins actually reduce risk in any meaningful way. Most disturbing is the data indicating that one of the reasons smokers are interested in these products is because it will enable them to put off the need to quit smoking (Zeller, 2003).

Third, in the absence of credible and validated science proving that reductions in exposure lead to reductions in risk, this new generation of tobacco products may be nothing more than a more sophisticated version of the "light" cigarette. We now know that "light" cigarettes were mistakenly believed by smokers to be safer than regular ciga-

rettes. Worse, we now know that "lights" contained design features that resulted in no meaningful reductions in tar or nicotine when smoked by consumers (National Cancer Institute, 2001).

**What Do We Need to Know?**

These public health concerns underscore the importance of developing a science base to inform policies and educate consumers about these products. Several investigatory steps are required to determine whether a product reduces exposure or disease risk and to assess the population impact resulting from the introduction and marketing of these products (Hatsukami, Hecht, Hennrikus, Joseph, & Pentel, 2003; Hatsukami, Henningfield, & Kotlyar, 2004; Stratton et al., 2001). Each of these steps is associated with a research challenge. The first step involves identifying toxins in the tobacco product itself and in the smoke. Once these toxins are identified, then cell culture (e.g., genotoxicity and cytotoxicity) as well as pre-clinical animal tests are conducted. The major challenge in this first step, however, is the ability to identify all the potential harmful toxins in the products. With novel methods of processing tobacco or delivery of tobacco, and the potential for the consumer to combine different tobacco products, new and yet unidentified toxins may be present (Hatsukami et al., 2003).

If the product demonstrates a reduction and no increases in potential toxicity during this initial assessment, then the next step would involve human clinical trials. The goals of clinical trials are primarily to determine the extent of tobacco toxin exposure in these products, as well as potential health effects, and the addiction potential for the product. In addition, these trials will monitor any unintended consequences as a result of product use. These clinical trials are also important to observe potential patterns of use of these products, in order to ensure that these patterns do not contribute to greater toxin exposure. The main research challenge for this step includes the limited availability of valid and reliable biomarkers that predict disease risk. Studies are needed that establish

specificity, sensitivity, reliability, dose-response relationship and predictive validity of biomarkers. These biomarkers are essential in order to circumvent the need to wait 20 years before the health effects of these products are observed.

Another important step in the assessment of these products is pre-market testing of consumer perception. Research challenges in this area include understanding how images, messages, and message placement affect perception of these products. An additional research challenge is to determine how valid information and messages can be communicated in a way that allows consumers to make informed and rational decisions about product use. Finally, pre-market research can serve as an early warning signal of potential unintended consequences if, for example, research were to establish that a product might reduce smokers' interest in quitting.

Finally, post marketing surveillance is also a crucial step in the assessment of potential harm associated with product use. If a product results in increased initiation, relapse to smoking among ex-smokers, or smokers continuing to smoke, then even if the product is associated with less toxin uptake, increase in harm may occur. In addition, long-term prospective surveillance studies can help determine how the product will actually impact health status. The primary research challenge will be to develop rapid post-marketing surveillance methods so that timely decisions can be made regarding a product.

**What Do We Know?**

Unfortunately, we know very little about the reduced exposure products. Only a few studies have examined the effects of these products on various biomarkers for exposure or health status. However, even with the limited number of studies, several conclusions can be made. First, when examining exposure to toxins in potential reduced exposure products, the use of machine-determined yields of toxins (e.g., Federal Trade Commission (Giovino et al.,

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1996) is not sufficient. This conclusion is based on prior research with low nicotine yield cigarettes, where studies showed no difference in nicotine exposure across machine-determined varying nicotine and tar yields of cigarettes, and also no differences in mortality and morbidity rates (Harris, Thun, Mondul, & Calle, 2004; National Cancer Institute, 2001). Smokers were observed to compensate for the low nicotine yield in cigarettes by smoking harder and more frequently (National Cancer Institute, 2001). Recent research of PREPs also demonstrate that if cigarettes with purported claims of reduced toxins are smoked by humans, the extent of toxin reduction is less -- and in some instances substantially less -- than the FTC determined levels described by the tobacco manufacturers (Hughes, Hecht, Carmella, Murphy, & Callas, in press; Lemmonds & Hatsukami, 2003).

Second, even when examining results from human exposure studies, mean reductions are not informative to the consumer because significant individual variation in toxin uptake is experienced, with some smokers demonstrating an increase in exposure (Lemmonds & Hatsukami, 2003). Third, not all toxins are reduced and exposure to some toxins may, in fact, increase. For example, Eclipse demonstrated a reduction in several toxins, yet exposure to carbon monoxide increased (Breland, Buchhalter, Evans, & Eissenberg, 2002; Lee, Malson, & Pickworth, 2004). Although this finding is not unexpected, the issue becomes whether this product should have any claim indicating reductions in toxins and, if so, then how best to convey this information to consumers so the informed decisions can be based on valid information. Fourth, even if studies demonstrate that modified products or nicotine delivery devices can significantly reduce toxin levels, we do not know if these exposure reductions mean that harm has been reduced in any meaningful way. The uncertainty surrounding the relationship between exposure and harm reduction is a central policy issue and concern.

Fifth, if a reduction in toxins is achiev-

able, it perhaps should be considered a standard for all tobacco products that are sold in that class, but without marketing claims. For example, a popular smokeless tobacco sold in Sweden has about half the amount of tobacco specific nitrosamines compared to products in the United States and result in about 50% less uptake of one of the major tobacco-specific carcinogens, 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone. These significantly reduced levels of carcinogens found in Swedish smokeless tobacco products or snuff may account for the lack of association observed between snuff use and oral cancer, compared to an increased incidence of oral cancer in smokeless tobacco users relative to non-users observed in the United States (Hatsukami, Lemmonds, & Tomar, 2004).

#### **A Word About Smokeless Tobacco**

Although an active debate has evolved around the issue of substituting smokeless tobacco for cigarettes as a method to reduce harm from cigarette smoking, little research has been conducted to inform the debate. The arguments for using smokeless tobacco in lieu of cigarette smoking are: 1) smokeless tobacco use has less associated harms compared to cigarette smoking because of the lack of combustion products; and 2) the greater use of smokeless and the consequent reduction in cigarette smoking among males in Sweden are considered to be one of the major factors associated with reduction of tobacco-related mortality and morbidity in that country. The primary arguments against this proposition are: 1) smokeless is not harmless, and in some countries, are associated with a number of health problems including oral cancer, other oral pathologies, increased risk factors for cardiovascular disease, fetal toxicity and pancreatic cancer; 2) smokeless tobacco is addictive and can lead to persistent use and difficulty quitting its use; and 3) smokeless may facilitate the uptake and use of cigarettes (Hatsukami, Lemmonds et al., 2004).

More importantly, the population effect associated with marketing smokeless as a substitute for cigarettes is unknown. It is

possible that in the competitive marketing environment seen in the United States, an increase in tobacco consumption without a significant decrease in mortality and morbidity will be observed. To date, only one small, open single arm pilot study has been conducted examining the effects of smokeless as a means to quit using cigarettes. In this study, of the 63 smokers who were enrolled in the study, 25% achieved cessation at one year and 13 out of 16 abstainers continued to use smokeless tobacco (Tilashalski, Rodu, & Cole, 1998). These rates are similar to those observed with medicinal nicotine, which is by far a safer product than smokeless. Unless a study is conducted comparing the use of smokeless tobacco with other pharmacological products, or as a substitute for smoking, it is difficult to assess if using smokeless tobacco as a method of cessation should be encouraged.

#### **What Do We Need to Assure Public Health?**

In order to circumvent a public health disaster with the introduction of products that claim reduced toxin exposure and reduced risk, assessment of these products by a regulatory agency, such as the Food and Drug Administration, is necessary. Regulation will require that companies that market these products demonstrate a proven reduction in toxins, an absence of unintended population level health effects, and a strong potential for a reduction in health risks. Furthermore, regulation of these tobacco products would also provide some assurance that the information that is provided to the consumer is valid and does not lead to misinterpretation. ■

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## Want to Know the Nuts and Bolts of Pursuing an Academic Career? Attend an APA Academic Career Workshop

As part of its outreach to graduate and postdoctoral students, APA's Science Directorate is proud to sponsor "Academic Career Workshops" that are held throughout the country. The Science Directorate hosts these workshops, which are designed to introduce graduate and postdoctoral students to the fundamentals of pursuing an academic career. Topics range from a description of variations in the academic culture across institutions to the pragmatics of the recruiting and hiring process. Accomplished panelists share their insights, with plenty of opportunity for discussion. Here are the upcoming APA Science

Directorate Academic Career Workshops:

Midwestern Psychological Association (MPA) Chicago, IL  
Friday, April 30, 2004  
8:00 am - Noon

Human Factors and Ergonomics Society, New Orleans, LA  
Date and Time to be Announced

Asian American Psychological Association  
Honolulu, HI  
Date and Time to be Announced

If you are interested in attending one of these workshops, please send an email to Deborah McCall at [dmccall@apa.org](mailto:dmccall@apa.org). These workshops are free, but an email stating your interest in attending is required. For more information on these upcoming workshops, please check out our website at [http://www.apa.org/science/acdworkshop02\\_main.html](http://www.apa.org/science/acdworkshop02_main.html).

## Interesting Careers

### A Psychologist in Animal Programs

by Jacqueline Ogden, PhD: Director, Animal Programs at Walt Disney World Resort

Some of my strongest early memories are of time spent at the San Diego Zoo – attending all of the education programs that I could, watching the monkeys, or petting the goats in the contact area. I still treasure the memories and pictures of those times. Like many “animal people,” I also spent much time in the natural spaces near my house, and had a series of unusual pets, including snails and snakes. But unlike some animal people, I’ve always been as interested in human animals as non-human animals. During my undergraduate years, I focused my energies on human critters, and studied industrial/organizational psychology, which led to a series of jobs in people management. But I retained my interest in animals and conservation and in my late twenties decided to combine my interest in people management with my passion for conservation. This led to an exploration of what turned out to be a wide variety of careers available in the animal and conservation arena (it turns out that my high school biology teacher was incorrect that the only animal-related career is that of a veterinarian). But based on my academic background, I decided to take my interest in psychology and expand it to the field of animal behavior. My choice of a graduate program was clinched when I found a school that not only was strong academically, where I would be able to do interesting research, but where my future advisor was seeking a student with an ultimate interest in zoo administration.

So I packed my bags and headed off from the land of coffee and mountains (Seattle) to the land of humidity and hills (Atlanta). And to a great four years of primate research at Zoo Atlanta, as my advisor (Dr. Terry Maple) was not only a psychology professor at Georgia Tech, but the director of Zoo Atlanta. These four years had some real highlights. Standouts included the case study of the introduction of a male gorilla to a new naturalistic exhibit and eventually to a family group. This was especially notable given that this gorilla (“Willie



JACQUELINE OGDEN

B”), had been housed inside and alone for 27 years (although Willie B is no longer with us, having since died of old age, he lives on in the two young gorillas he eventually sired). I also met my future husband during that time, who, luckily for me, is very flexible and supportive of my career. So flexible that, upon my getting an offer to conduct my dissertation research at the San Diego Zoo, agreed to get married, pack it all up, and move across country with our two cats, all in a two-week period.

I thus went to the Zoological Society of San Diego to be part of their well-respected research department – the Center for Reproduction of Endangered Species. My research initially focused on an evaluation of the impact of a new gorilla exhibit on both the gorillas and the zoo visitors. Key was a finding that the pre-recorded natural sounds that were included in the exhibit had a significant and positive effect on the zoo visitors – both in terms of how they felt about the experience and even what they got out of the experience. After receiving my PhD in general/experimental psychology with a specialization in animal behavior and a minor in management, my pre-doctoral fellowship turned into a post-doctoral position, and eventually a move into a curatorial role as the Children’s Zoo Curator. This position afforded many learning opportunities, from managing a large team of people, to learning about educational methods and animal management. I was especially focused on learning about conservation

education, as I felt this represented a significant lack in my training. Imagine my surprise as I sat in a class focused on the foundation of instructional methods, only to discover that it was a repeat of my psychology foundations’ course. Guess my psychology background paid off here, as well. And I managed to keep my hand in research, switching to more study of human behavior – in particular the impact of zoo experiences on conservation-related knowledge, attitudes, and behavior.

But as I was happily toiling away at the San Diego Zoo, my colleagues in the American Zoo and Aquarium Association (AZA) started talking about this new animal park that was being built in Florida. The AZA is a very strong, very active professional association that accredits North American zoos and aquariums that are dedicated to providing excellent care for animals, a great experience for their guests, and a better future for all living things. At this time, many members of the AZA were a-buzz about this new park, Disney’s Animal Kingdom that was being built in Orlando. Although I was very happy in San Diego, I was intrigued by the possibility of helping to open a new park and was especially drawn by the possibility of being able to inspire millions of guests every year to conservation action: guests who weren’t necessarily already well-versed in the animal and conservation arena.

So I dragged my husband back across the country and re-settled in Central Florida. I’m now the Director of Animal Programs for the Walt Disney World Resort. This means that my team is responsible for the animal care, the veterinary care, the education and the science programs in the areas of Walt Disney World where we take care of animals, including Disney’s Animal Kingdom, Disney’s Animal Kingdom Lodge, Epcot’s The Living Seas, and the Tri-Circle D Ranch at Fort Wilderness.

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Both Disney's Animal Kingdom and The Living Seas are AZA accredited facilities. I love it. I've learned an incredible amount working for The Disney Company, I have a great team, and I truly believe that we inspire our guests every day to care more about animals.

Although this role may seem a bit odd for someone with a doctorate in psychology, I find that I use my academic training constantly – if imperfectly. My understanding of human behavior comes into play in virtually every meeting that I'm in (my understanding of non-human primate behavior comes in handy here too). I've particularly found my background to be critical as the zoo and aquarium world has become more focused on influencing changes in conservation-related behavior. I don't use my training perfectly, but I've found that a little understanding of animal behavior – both human and non-human – can go a long way. ■

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### APF/COGDOP Graduate Research Scholarships in Psychology

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

The scholarships will be given directly to the individual graduate students enrolled in an interim master's program or doctoral program.

**DEADLINE FOR APPLICATION:  
MAY 28, 2004.**

For more information, visit  
<http://www.apa.org/science/apf-cogdop.html>.

## Predocctoral Interdisciplinary Research Training (PIRT) Program in the Educational Sciences

The passage of the No Child Left Behind Act of 2002 signals that the education enterprise of the United States has entered a new era in which policy and practice are expected to be based on evidence. Practitioners will have to turn routinely to education research when making important decisions and education researchers will have to produce research that is relevant to those decisions. It will require training new researchers in sufficient numbers to address the many tasks at hand. The Institute of Education Sciences (Institute) has released a Request for Applications (RFA) to provide institutional support for new Predocctoral Interdisciplinary Research Training (PIRT) Programs in the Educational Sciences.

The Institute's objectives in creating the PIRT programs are to: (1) support the development of innovative interdisciplinary training programs for doctoral students interested in conducting applied education research; and (2) to establish a network of training programs that collectively produce a cadre of education researchers willing and able to conduct a new generation of methodologically rigorous and educationally relevant scientific research that will provide solutions to pressing problems and challenges facing American education.

In order to increase the supply of scientists and researchers in education who are prepared to conduct rigorous evaluation studies, develop new products and approaches that are grounded in a science of learning, design valid tests and measures, and explore data with sophisticated statistical methods, this initiative will fund the creation of innovative interdisciplinary research training programs in the education sciences.

Grants will be awarded to institutions that can put together a program across

disciplines such as psychology, political science, economics, statistics, sociology, education, and epidemiology that will provide intensive training in education research and statistics. Predocctoral students will graduate within a traditional discipline, e.g., economics, but will receive a certificate in education sciences, and will be expected to conduct doctoral research on education topics.

The RFA is posted on the Institute of Education Sciences web page: <http://www.ed.gov/programs/edresearch/applicant.html>.

Application forms and instructions for the electronic submission of letters of intent and applications will be available from the following web site: <http://ies.constellagroup.com>.

Awards will be made in amounts ranging from \$500,000 to \$1,000,000 (total cost) per year for a duration of five years. The amount of the award will depend on the scope of the program and the number of fellows to be supported on stipends. The number of programs funded depends upon the number of high quality applications submitted. Deadlines: Optional Letter of Intent March 11, 2004; Applications: May 27, 2004.

Contact: James Griffin, IES,  
Telephone: 202-219-2280;  
Email: [James.Griffin@ed.gov](mailto:James.Griffin@ed.gov). ■

# Affective Forecasting: The Perils of Predicting Future Feelings

by Brett Pelham, Senior Scientist

We can all remember times when we've found ourselves in trouble by misspeaking, misremembering, or miscalculating. Psychologists Dan Gilbert and Tim Wilson, who study affective forecasting, believe that there are also times when we can get into trouble by miswanting. If you are wondering how anyone could ever miswant something, consider how wanting is intrinsically tied to predicting. To want something is to predict that when we get it, we will feel good. Moreover, the better we think something will make us feel, the more we want it.

Here lies the problem of miswanting. However, the problem is not that people do not know the difference between apple pie and a knuckle sandwich. Instead, miswanting refers to the fact that people sometimes make mistakes about how much they will like something in the future. That is, people often mispredict the duration of their good and bad feelings.

There are several reasons why people mispredict how they will feel about future events. One reason is focalism: we focus too heavily on a single good or bad event when considering how that event will make us feel about our lives. In the case of negative future events, a second reason is that we are typically unaware of the operation of our own psychological immune systems. When a terrible event befalls us, the psychological immune system jumps into action, in much the same way that our physical immune system jumps into action when we encounter a life-threatening virus. However, because the psychological immune system is largely unconscious, most people don't realize its power.

In one early study of affective forecasting, Gilbert and colleagues documented a common belief among assistant professors: they believed that their tenure decisions would strongly influence their long-term happiness. They then checked this prediction by assessing the actual happiness of two groups of former assis-

tant professors: those who had received tenure and those who had not. The result? Those who had failed to receive tenure in the past few years were just as happy as those who had achieved it. Similar results have been observed in labs across the country. For example, a classic study by Philip Brickman and colleagues showed that, even in great quantities, money doesn't buy happiness. A year or two after hitting the big numbers, lottery winners were about as happy as they were before striking it rich.

Researchers who study affective forecasting have shown that our failure to appreciate how quickly we adapt to good and bad events applies to our reactions to such diverse events as having one's beloved team lose a college football game and having someone else win the hand of someone we love. Those who study affective forecasting have also turned their attention to less dramatic events by showing that mildly bad events occasionally bother us longer than seriously bad events. In one study, Gilbert and colleagues asked some people (forecasters) to predict how much they would dislike someone who had recently insulted them. They asked others to predict how much they would dislike the same insulting stranger when they merely observed the stranger insult someone else in the very same manner. Not surprisingly, people expected to dislike a stranger more after they had personally been the victims of his criticisms. But if people's psychological immune systems only kick into gear when they have personally been insulted, then people might actually dislike insulters less when they become the object of attack. When people were put in this actual situation, this is precisely what happened. Victims disliked insulters less than those who were mere observers. Presumably, more intense interpersonal threats often trigger quick, self-protective responses that mute our initial feelings of dislike.

Do these studies have implications for important life decisions? Gilbert and Wilson think so. For example, they noted that in some living wills, people specify that if they ever reach a point at which the quality of their life is very low, they do not wish to receive any special medical attention that would prolong their life. However, when medical researchers interviewed people who were slowly dying and experiencing a very low quality of life, such people almost unanimously reported that they would go to great lengths to add even a few days to their lives.

In another example, Gilbert and Wilson recently noted that drivers may practice safe driving habits more rigorously when taking long trips than when driving around the block. "If a trip to another state triggers the decision to wear a seat belt and a trip around the block does not, the paradoxical consequence is that people may be more likely to sustain injuries in automobile accidents when they are taking short rather than long trips" (Gilbert et al., 2004). ■

## For Further Reading

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