

The Message and the Media

call from the press can be a source of pleasure, anxiety, or disdain for psychologists but, love it or hate it, the fourth estate is something that many behavioral scientists find themselves encountering more and more lately.

Whether it is for a comment for a newspaper article, a magazine feature on a new book, or a segment on the ubiquitous evening news magazine show, psychologists are often participants in the news process. While some scientists may be guarded and wary of the media, others have embraced the relationship between science and the media and call it an unparalleled dissemination opportunity to share psychological research with the public.

"We can reach a few hundred people with

a journal article. The media can reach a few million," said APS President Elizabeth Loftus. "A good working relationship with the press can mean that our ideas and findings get passed on to large numbers of people, helping to dispel myths about psychology that can be harmful."

In addition to furthering the "giving away" of psychological research and reconciling misconceptions about the field, media coverage of psychological science and the use of psychologists as commentators reinforces the important role of behavioral science in so many aspects of life. The *Observer* talked to several psychologists whose names are often

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Who's Afraid of Y2K?

ou've seen the websites counting down the days, hours, minutes, seconds and milliseconds. You have read the headlines, seen the news programs, and may have even spent an evening or two discussing it.

Tick-tock, tick-tock—like it or not the countdown to the new millennium is well on its way. And in most places, Year 2000 (Y2K) preparations have been well underway for quite some time. From large corporations to the government to the tiniest stores in the smallest towns, the race is on to upgrade, debug, and fix any potential glitch that could prove to be more than an annoyance as the clock strikes midnight on January 1, 2000. But as a psychologist and a researcher, have you taken the time to think about how Y2K will affect you?

Before the panic sets in and you pack up your family and head for the hills, you may be happy to hear that at least those interviewed by the *Observer* were very pleased with their institution's Y2K preparations.

Y2K at UVA

The University of Virginia (UVA) has been hard at work trying to correct the Y2K problem. The departments of Information Technology and Communication, and Financial Administration started Y2K work back in 1996. These departments, along with the UVA Health System and the Y2K Steering Committee, which includes Levi Taylor, an associate professor of psychology and chair of the psychology department's computer committee, have had an active part in evaluating the status of University departmental computer systems.

For Taylor, Y2K compliance first required taking an inventory of all the computers' manufacturers and operating systems in the psychology department. Then, all mission critical hardware and software within the psychology department was updated. After this was done, all the department's non-mission critical hardware and software were updated.

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As announced last month, the 1998 and 1999 issues of *Psychological Science* are now available online to APS members.

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The philosophy and goal of the **Observer** (ISSN: 1050-4672), published 10 times a year by the Ameri-can Psychological Society (Federal ID Number: 73-1345573), is: to educate and inform APS members on matters affecting the academic, applied, and research psychology professions; to promote the professional image of APS members; to report and comment on issues of national interest to the psychological scien-tist community; and to provide a vehicle for the dis-semination of information on APS.

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All APS members receive the **Observer**. Domestic non-member subscription rates are \$35 (individual), \$50 (institution) and foreign rates are \$50 (individual) and \$55 (institution) per year. Send subscription re-quests to the address below. Third-class postage is paid at Merrifield, VA. **Postmaster**: Send address changes to American Psychological Society, 1010 Vermont Ave., NW, Ste. 1100, Washington, DC 20005-4907.

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- In a special column, Leonard H. Epstein of the NIH Center for Scientific Review discusses the need for psychological scientists' participation in review system.
- FOIA Access Update 12 The U.S. Chamber of Commerce and Gun Owners of America flood the Office of Management and Budget with cookie-cutter emails in support of regulations, but will Congress look at the quantity or quality of comments?
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Future.com

Elizabeth Loftus President, American Psychological Society

ne of the great things about being in academia is that you never know for sure what each day is going to bring. Just recently I opened a letter from APS Fellow Robert Kleck, chair of psychology at Dartmouth College. He told of plans for the formal dedication, later this summer, of a new campus facility devoted entirely to the Department of Psychology and the Center for Cognitive Neurosciences. After the building is dedicated, there would be a symposium on "Psychological and Brain Sciences in the 21st Century." He wondered whether I could speak for 40 minutes on this subject. Really?, I thought. Me? Predict the future of psychological science? What do I know about the future? Do I even know five minutes worth, let alone 40?

How do we begin contemplating the future of a discipline? Can we predict with any hope of accuracy? If we could, we'd have a chance to prepare for the future, but many are pessimistic about this entire enterprise. As one analyst put it, "there is no way to rehearse effectively for the future, any more than it is possible to rehearse for a blind date."

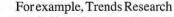
Although we might be experienced teachers or researchers, we have little experience predicting the future. Outside our field, however, there are individuals who have lots of experience doing just that and people pay good money to hear them. To see how they do it, graduate student and APS Student Affiliate Jacquie Pickrell and I consulted one best selling volume called *Trends 2000: How to prepare for and profit from the changes of the 21st century.* We wanted to find out what the "experts" say will happen in the future, and then speculate on what it might mean for psychological scientists.

First, who are these "future experts?" The author of *Trends* 2000, G. Celente, is a business consultant at Trends Research Institute. The Institute, founded in 1980, includes a consortium of scholars, scientists, writers, and thinkers, who study and analyze a variety of publications to track trends. They track in a wide array of areas "from abortion, agriculture, art and astrology, to video conferencing, voluntary simplicity, walking, water, zoning, and zoos."

Readers of *Trends 2000* are reminded early on that people who predict the future make mistakes, and these can be embarrassing. For example, in the 1960s, futurists predicted that by the 1990s we would be working less than 23 hours a week and would have a great deal more leisure time. This didn't happen. In 1977, the chairman of Digital Equipment made a prediction about computers when he addressed the World Future Society: "There is no reason for any individual to have a computer in their home." He was wrong. Back in the 1970s, some investors backed Beta, but are now wishing they had favored VCRs.

And what about predictions that were not made, and might have even been labeled "inconceivable" just a decade ago. Was anyone predicting that in 1998 the U.S. Postal Service would be handling 600 million pieces of mail daily, but that the average number of email messages sent daily in the United States would be over 2 billion?

Although mistakes in prediction are certainly possible, some of the predicted trends are well underway towards "coming true" and they will have dramatic implications for the lives of psychologists.



Institute had predicted a growing revolution in education in the form of "distance learning." Distance learning, they predict, will provide rich opportunities for entrepreneurs, scholars, educators, inventors, and others. Where students learn, how they learn, and what they learn will be transformed. Trends Research Institute invites us to imagine a future in which students can have ready access to resource libraries around the world, without ever stepping out of their dorm room. They won't need to sit in crowded lectures, surrounded by hundreds of classmates, and listen to professors who aren't particularly interested in teaching. Rather, they will have access to the best teachers. Relatively few ever saw William James deliver a series of lectures. Had he lived in the future, hundreds of thousands of psychology students might have this opportunity. In fact, simulcasts of James' lectures could be sent live or recorded in "real time" to a student's personal computer thousands of miles away. The benefits of Interactive University are many, not the least of which is that students can learn at their own individual pace, and they would have more courses from which to choose.

Distance learning could set the stage for distance research. Just as our would-be distance student is gathering information from the lessons conveyed at Interactive University, so the faculty member could gather information back from the student. Mini-experiments could be inserted within the lessons, gathering data from the students before revealing to them the meaning of the manipulations (assuming all the necessary consent issues were ironed out). With the prediction that universities will be downsizing, eliminating jobs, and imposing heavier workloads on faculty, it may be necessary for our successors to find easier ways to gather their empirical data and make the kinds of new discoveries that have invigorated the field in the past.

Another way to think about the future involves the construction of possible "scenarios" or possible future worlds. Simply put, scenarios are devices for helping people to take a long view about the future of our society. Peter Schwartz, one of the

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Letters to the Editor

THE NAME GAME

Editor:

I think the proposed change to Association for Psychological Science is a small step in the right direction. I am not smart enough to know whether it is large enough to be worthwhile or so small as to impede real progress. If it clarifies the public perception of APS vis-a-vis APA, then all the better. But such clarification depends largely on deeds not words. If APS is doing the right things, it will call attention to psychological science regardless of what APS stands for.

> DAVID W. CARROLL UNIVERSITY OF WISCONSIN-SUPERIOR

Editor:

Yes, I support the name change. NANCI WOODS AUSTIN PEAY STATE UNIVERSITY

Editor:

There are points to be made on both sides of the name change issue. The word "psychology" itself has changed in common usage. Before mid-century, a clinical psychologist was a scientist who applied knowledge in a clinic. But, because the ordinary person is likely to only encounter clinical or counseling psychologists during a lifetime-and even the college-bound meet their first academic psychologists after age 18-it is a natural shorthand to drop the modifier indicating a therapeutic specialty. The same thing has happened to the word "doctor" which is Latin for "teacher," and was originally used as a courtesy toward physicians as also being learned persons. However, the roots of psychology are in scholarship. "Psyche" and "logos" are Greek meaning respectively "mind" (soul, spirit, and life principle), and "word" (doctrine, reason, and speech). Alternately, the root of the medical specialty "psychiatry" is the Latin "iatria" which means "healer."

As a learned society, should APS use the scholarly definition of "psychology" to mean "the study of the mind," or the common definition of "non-medical therapy of the spirit?" In looking at this month's *APA Monitor*, I note that the writers often have dropped the "clinical" modifier and simply refer to psychologists doing therapy, but use "research" before psychologist for those who are engaged in science. Should scholars accede to this trend and change the name of the APS? If so, the term scientific psychology by default would become synonymous with "systematic investigation of psychotherapy." Does this clarify anything? The problem we are having is parallel to what might have happened in another science if physicians had decided to call themselves clinical biologists.

There is a more precise approach than changing our name. The other possibility would be using the proper term "psychotherapy" for the helping applications of our field. The PsyD degree could become the Doctor of Psychotherapy. The title licensed by state legislatures for both counselors and clinicians could be "psychotherapist." With such use, the word psychology would return to its meaning of scholarship.

> JOHN H. NEWMAN UNIVERSITY OF SOUTHERN CALIFORNIA

Editor:

I fully support a name change to either Association for Psychological Science or Association of Psychological Scientists.

> CHARLES S. L. POSTON UNIVERSITY OF NORTHERN COLORADO

Editor:

I strongly favor the name change to Association for Psychological Science. The original name always seemed like a "me too" name copied from APA. The new name would help regain credibility for a field too long associated with talk shows and pop psychology.

> DON PATTERSON JACKSONVILLE STATE UNIVERSITY

Editor:

I'm going to go ahead and lend my voice to those in favor of the changing of this group's name. Here's a brief explanation of why: as a relatively new affiliate of the society, I already "see" science in the name American Psychological Society almost as if the word itself were in the title; based on the association with a certain publication we all receive and one scienceoriented convention. But however widespread this phenomenon is among us, knowledge of the fact that psychology can be and is practiced as a science truly is lacking from the awareness of the wider world. To the extent we wish to be bold about our epistemic values we should announce them everywhere. Now if only APA would rename itself the "Association of Psychological . . . Anything." I humbly apologize for this sad attempt at a humorous ending, but could not resist trying.

> CHRISTOPHER J. ANDERSON SUNY-ALBANY

Editor:

I favor the name change, but would prefer the Association for Psychological Scientists, sharpening the image (and reality) and, at the same time, not suggesting that there is any part of our discipline of psychology that is not subject to the tenets of science. As a non-citizen of the United States, I would also be more comfortable in an organization not tied to one nation. However, I wish the sniping at the American Psychological Association (APA) would end. It's petty, unprofessional and unnecessary. Indeed, one might think that the defining characteristic of APS is that it is not APA. APA has broad interests including science: research, PSYCHLIT, conferences, and many of the major journals. Many-perhaps most-APS members also belong to APA. APS has a more narrow or focused mandate, which is fine, and the new name would reflect that mandate.

> Stan Sadava Brock University

PSYCHOLOGY + X

Editor:

Multidisciplinary (independent disciplines working on common problems) and interdisciplinary (disciplinary teams working on a common problem) are important distinctions.

I have been in a highly successful multidisciplinary area of research for some 40 years: sleep research. I published my first sleep paper in *The Journal of Experi*-

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Opinion _____ In Praise of Dilettantism

Robert J. Sternberg Yale University

Elena L. Grigorenko Yale University and Moscow State University

Dietertantism gets a bad rap among psychologists. In search-committee and promotion-committee meetings, referring to someone as a dilettante can be the kiss of death. Sometimes alternative expressions are used: The candidate "lacks focus," "lacks direction," or worse, "is scattered," which may be perceived as being only a few steps away from the candidate's being "scatter-brained."

We believe that the bad rap is a bum rap—that, in fact, dilettantism is good for psychological scientists and good for the field too. A number of arguments—perhaps "scattered" arguments—support our claim. In making this claim, we are drawing on an investment theory of creativity, according to which creative individuals are like good investors (Sternberg & Lubart, 1995, 1996). One principle of good investing, of course, is buying low and selling high. In the domain of creativity, this principle translates into generating ideas that tend to defy the crowd. But another principle of good investing is diversification—creating a diversified portfolio of varied assets. Diversified portfolios of assets, on average, yield the greatest investment returns (Dreman, 1977) because they provide opportunities for growth at the same time that they shield investors from risk. Diversified portfolios of research can do the same, as we now show.

Arguments in Favor of Dilettantism

First, many of the greatest psychologists in the history of psychology have been dilettantes, which, in our language, translates into diversified investors in the world of ideas. For example, William James was a full-fledged philosopher as well as a psychologist whose work covered almost every subfield of psychological science. Sigmund Freud encompassed into a single theory ideas about development, cognition, motivation, personality, abnormal behavior, and psychotherapy. B. F. Skinner embraced the study of learning but was a novelist, social theorist, and developmental psychologist as well as an applied behavioral analyst. Lev Vygotsky's work crossed into the areas of cognition, culture, normal and abnormal development, history of psychology, and art. Jean Piaget ventured in his thinking into areas of biology, philosophy, and cognitive, social, and moral development. One might argue that the field of psychology has changed and become more specialized. But many of the greatest psychological scientists of modern times also have covered a wide variety of fields. Among these scientists are Lee Cronbach, William Estes, Leon Festinger, Jerome Kagan, Daniel Kahneman, Michael Rutter, Roger Shepard, Amos Tversky, Robert Zajonc,

and many others.

Second, psychologists who diversify their research, like investors who diversify their investments, are better protected against areas of research that go kaput or that become deadends. The death of the study of chopped-up planaria, for example, perhaps was as gruesome as the death of the planaria themselves (see Rilling, 1996). Some fields or paradigms prove to be fads, but it usually is only after the fad ends that the fad can be recognized as such (Sternberg, 1997a). By working in a variety of areas, a psychologist can protect him or herself from landing in a dead end with nowhere else to go.

Third, diversifying research helps protect researchers-as well as the consumers of their research-from sheer boredom. Research shows that creative people are those who are extremely enthusiastic about and committed to what they do (see Amabile, 1996; Gardner, 1993). Such individuals are more likely to experience a kind of "flow" in their work (Csikszentmihalyi, 1996). One is less likely to get bored if one has a variety of research projects than if one has only a single kind of project. Simonton (1994) has pointed out that, as they become older, many researchers become less productive. There may be many reasons why. But almost certainly one reason is that some researchers milk a paradigm or line of work for what they can get from it. Failing to diversify in their work, they then seek out the kinds of other responsibilities that will fill their time with activities that, however meaningful they may be, take them away from their research, whether intentionally or inadvertently. Diversification also allows researchers of all ages to incubate in one area while they actively are pursuing their investigations in another.

Fourth, investing in a variety of kinds of research potentially produces a kind of "hybrid vigor" in research that one could never get when pursuing only a single area. Gruber (1989) has pointed out how the most creative scientists have a network of enterprises, many of which originally may seem disconnected but which then eventually come together. They are able to merge their diverse network of enterprises precisely because they define themselves broadly rather than narrowly in their work. They often take the kind of interdisciplinary focus that defies conventional boundaries in the field (Ruksznis, 1999). How odd, then, that more and more researchers are taking pride in the very narrowness that typically has not characterized the greatest of scientists.

Possible Arguments Against Dilettantism

Of course, arguments might be advanced against dilettantism. Let us examine these arguments.

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Training, Behavior Science Initiatives Top APS Issues at NIH for FY 2000

To only money grew on trees. For one thing, it would make the pollen problem in Washington a lot easier to take. For another, psychology researchers wouldn't have to worry about getting grants from the National Institutes of Health (NIH)—they could just go outside and pick enough for a research assistant or two, and maybe a brain imaging machine or a really nifty computer.

Unfortunately, when it comes to money, the only branches we're dealing with here are the branches of government. And right now, as the annual budget process for NIH and the rest of the federal government gets into full swing, the legislative and executive branches—you know them as Congress and the Clinton Administration — are trying to, well, prune each other's version of the federal budget, in the same way those notorious Tidal Basin beavers were trying to prune some cherry trees earlier this year. The cherry trees and the beavers are gone, but the budget debate lives on.

APS Executive Director Alan G. Kraut recently delivered testimony to the U.S. House of Representatives on the FY 2000 budget for NIH. He focused on funding policies affecting psychology research and behavioral and social science research at the agency. (The full text of the APS statement follows. In addition, it is available on the APS Website at www.psychologicalscience.org.)

"I am an unabashed advocate for NIH," Kraut told the lawmakers on the House appropriations subcommittee that oversees NIH. "However, I must point out that for many of the nation's most pressing public health concerns," he continued, "major advances will not be achieved without changes in NIH's general approach to health and behavior and to behavioral science."

Kraut attributed NIH's lack of recognition for behavioral science to the fact that NIH leadership makes an artificial distinction between biology

The Smart Money is on Behavioral Research at NSF

hen stocks split, individual shares go down in value. But soon after, there often is a price jump because the momentum that caused the split in the first place attracts more investors. Now we're not saying that the National Science Foundation (NSF) is just like America Online, but NSF's single division for behavioral and social sciences has split into two new divisions, and we think the smart money should follow.

This was the message from APS to Congress when Executive Director Alan G. Kraut testified before the House appropriations subcommittee that will determine NSF's budget for FY 2000.

NSF's Social, Behavioral, and Economic Research (SBER) division has been reorganized to create a division for behavioral and cognitive sciences and one for social and economic sciences. "There was just too much breadth and depth in these fields to be contained in one research division," Kraut explained. "The reorganization will enable NSF to accommodate the explosive pace of discovery" in these areas, he said, but a

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and behavior, and that the disease model prevails at NIH.

"When you look at what determineshealth, you can'thelp but notice behavior," he said. Smoking, drinking, taking drugs—all begin as behaviors. But in the NIH model, the initial behavior is ignored until a person gets lung cancer, emphysema, heart disease, liver damage, or brain damage. And then, too often the approach is, 'Okay, it's time for you to quit.' That is



Kraut told Congress that advances in public health cannot occur without changes in NIH's approach to behavioral science.

easier said than done," said Kraut to the nodding agreement of the subcommittee members.

In making his case, Kraut cited a recent editorial in *Science* by David Hamburg, the distinguished physician and president-emeritus of the Carnegie Corporation, in which Hamburg described the "enduring prejudice against objective inquiry into human behavior."

"Hamburg also noted that a few decades ago, conventional scientific wisdom discouraged biochemistry, which was seen as a combination of weak biology and weak chemistry," said Kraut.

"Hamburg's lesson," he continued, "is that just as we overcame scientific blinders then, today we need a 'widening of horizons to include new or neglected lines of inquiry, and a commitment to the scientific study of human behavior.' I second that.

"The point is, behavior is as threatening to health and well-being as any genetic or biological condition," said Kraut.

He pointed to the lack of support for behavioral science infrastructure, needs such as training and instrumentation, and the absence of behavioral scientists in NIH leadership as additional evidence that health and behavior is not seen as a core element in NIH's mission.

The testimony also addressed several specific initiatives that APS is encouraging in order to "widen NIH horizons," ranging from increased training for new investigators, to implementation of behavioral science priorities at several individual institutes. Here are the highlights:

APS is asking Congress to encourage increased behavioral science research training at NIH. Ever since the National Academy of Sciences (NAS) issued its 1994 report on National Research Service Awards (NRSA), Congress has been asking NIH to implement the NAS recommendations to increase the number of NRSA awards for research training in behavioral science along with nursing, oral health, and health services research. NIH has continued to ignore both NAS and Congressional signals on this issue.

APS is also asking Congress to continue its support for the establishment of B/START (Behavioral Science Track Awards for Rapid Transition) programs at NIH institutes, to provide sustenance grants to newly-minted PhDs. Noting that the National Institute on Alcohol Abuse and Alcoholism was the most recent to join the ranks of B/START institutes, APS is urging that a similar program be established at all institutes, and particularly the National Institute of

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May/June 1999

AMERICAN PSYCHOLOGICAL SOCIETY ALAN G. KRAUT, PhD, EXECUTIVE DIRECTOR on **FY 2000 APPROPRIATIONS** for the NATIONAL INSTITUTES OF HEALTH SUBCOMMITTEE ON LABOR, HEALTH AND HUMAN SERVICES, AND EDUCATION COMMITTEE ON APPROPRIATIONS, U.S. HOUSE OF REPRESENTATIVES

Testimony of the

THE HONORABLE JOHN E. PORTER, CHAIR

Mr. Chairman, Members of the Committee:

Thank you for allowing me to testify today on the FY 2000 appropriations for the National Institutes of Health (NIH). I am Alan G. Kraut, the Executive Director of the 15,000-member American Psychological Society. Our members are researchers and academic leaders in scientific psychology at colleges and universities throughout the nation. These are the scientists who investigate the connections between the brain and behavior; who delve into the basic processes of cognition and memory in people of all ages; who study the interactions of the mind and body to improve health; who research how children grow and learn; who produce the behavioral science knowledge that helps to manage debilitating chronic conditions such as diabetes and arthritis as well as depression and other mental disorders; and who conduct research on the behavioral aspects of smoking and drug and alcohol abuse in order to find ways that people can escape addiction. The behavioral research enterprise spans from theoretical to applied, from basic to clinical, and it extends to almost every institute at NIH.

Mr. Chairman, first let me thank you for all your support and for the support of the subcommittee in the enormous role you played in increasing the NIH budget. We are here to do what we can to encourage a similar increase this year. As a member of the Ad Hoc Group for Medical Research Funding, APS recommends a 15 percent increase for NIH in FY 2000. We recognize the difficulty this presents in the context of the budget caps on spending. However, the expansion is needed to ensure NIH's fulfillment of its public health mission.

My testimony today focuses on behavioral and social science research at NIH. I am an unabashed advocate for NIH, as more than ten years' worth of my testimony before this Committee indicates. However, I must point out that for many of the nation's most pressing public health concerns, major advances will not be achieved without changes in NIH's general approach to health and behavior and to behav-

Over the past decade, this Committee, along with your

colleagues in the Senate, repeatedly urged NIH to increase its funding for behavioral and social science research. Why? It's because the evidence grows year after year that the biggest health risk in our nation is unhealthy behavior. Surgeons General have weighed in on this, as have the National Academy of Sciences, others in Congress, several Secretaries of HHS, and even some smaller parts of NIH itself. They all say the same thing: The leading causes of death and premature mortality in this country - more than 50 percent of them — are due to behavior. Think of just some of our national public health problems: smoking, drinking, drug abuse, violence, suicide, teen pregnancy, and obesity. All begin with behaviors, but they end with devastating physical, psychological, social and economic consequences: lung and heart disease, neurological disorders, catastrophic injury, sexually-transmitted diseases, and developmental disorders, to name a few. Now, think back to the hearings with NIH witnesses earlier this year, and try to recall anything about behavioral research initiatives. You won't be able to. Behavior is not what you hear about when you talk to most institute directors, and it's not what you read about when you find a list of NIH priorities.

Why the gap between NIH priorities and behavioral aspects of health? One reason is that NIH leadership sees biology as its core, and sees behavior as too far afield from that. But this distinction between biology and behavior is an artificial one. The behavioral side of an individual is inexorably linked to the biological side. Still, most molecular or biological scientists I know don't view it that way. I have often heard outright astonishment from my biological colleagues after they sit through a talk on something like the impact of learning on brain structure, or the way genes work to allow a child to live within his or her environment, or some new finding about the biological basis of emotion, or information about electrical brain activity associated with changes in thinking. It opens up new worlds to them, and they are worlds of human functioning that NIH should be promoting.

A second problem NIH has with behavior stems from the

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(delivered April 21, 1999)

APS Publishes Book of Teaching Columns

Lessons Learned to offer practical advice on teaching psychology at every level

The popular Teaching Tips columns that have been a staple of the Observer for many years are now available in a single publication. Lessons Learned: Practical Advice for the Teaching of Psychology compiles all of the useful and valuable Teaching Tips columns that have appeared in the Observer since the feature began in 1995 in addition to those that will be printed through November 1999—and it is available to APS Members at a special price (see below).

"There is a lot to teaching besides knowledge of the subject matter," said Baron Perlman, who, with Lee I. McCann and Susan H. McFadden—all of the University of Wisconsin-Oshkosh—have served as editors of the Teaching Tips columns and editors of *Lessons Learned*. "The book helps teachers in making best use of their expertise and knowledge. Since the columns were written over a period of years, we had the time to devote to quality in ideas and editing."

Lessons Learned is an essential guide for the psychology teacher and teacher-in-training at every level of instruction—from the high school teacher to the university teaching assistant to the graduate school professor. The columns have been organized as a series of chapters that can be referred to individually for specific problems or issues, and read as a whole for a comprehensive understanding of the teaching experience.

The Teaching Tips column has been a standard feature of the *Observer* for about five years. It grew out of the combined desire of Perlman, McCann, and McFadden to share

both general information on teaching and specific tips and ideas that could improve the overall teaching experience. After writing an *Observer* article on obtaining a first teaching job, Perlman and McCann proposed an ongoing column about teaching. McFadden joined the editorial team and the Teaching Tips column became a reality. Since the first installment, Perlman and his co-editors have carefully selected and solicited columns on topics they thought people would find useful. In some cases, the columns found them.

"We didn't seek columns only on our ideas of what was important in teaching," said Perlman. "We attended conferences, talked with faculty, and had faculty approach us with ideas. We found many excellent topics this way. This book, in compiling all of the Teaching Tips columns, should prove useful for all teachers, new and experienced alike. It is almost impossible to read any one chapter without getting at least one good idea for teaching. Almost all faculty teach and some teach a great deal. The book serves to assist them in these endeavors, counterbalancing the voluminous information available on scholarship."

APS decided to publish all of the columns in one book—the first in APS's book publishing endeavors—after the Society received a number of compliments on the usefulness of the columns and inquiries as to whether the columns were available in a single publication.

"The book is holistic in that it emphasizes teaching technique as well as the interpersonal and ethical aspects of teaching," said Perlman. "Since the book is written by psychologists, the examples and many of the teaching problems presented will be very familiar to teachers of psychology. However, the themes and issues covered will be of interest to teachers in all fields of academia."

Topics covered in Lessons Learned: Practical Advice for the Teaching of Psychology include:

- Finding the right textbook
- Tips for teaching Introductory Psychology
- Creating good exams
- Computerizing your course
- Developing effective lectures
- Classroom demonstrations
- ♦ Academic advising
- ♦ Literature searches
- Dealing with academic dishonesty
- Ethically risky situations

and much more.

Lessons Learned is a practical presentation of the processes and issues involved in the teaching of psychology. For new teachers and teaching assistants, the book is a good starting point. For the experienced teacher, it is a valuable resource to consult. Each of the 37 chapters can stand alone-as they have done in the Observer's Teaching Tips feature-but in the actual teaching of a course over a semester, many of the topics interconnect. Updated references and recommended readings are listed at the end of each chapter to provide further help to the reader. After exploring each chapter, readers should have several new teaching ideas to think about and be able to implement those of interest.

Lessons Learned: Practical Advice for the Teaching of Psychology is available from APS for \$20 for APS members (the nonmember price is \$30), plus \$3 for shipping. To purchase the publication, fill out the order form below and either fax or mail it in with your payment. (If you are paying by check, we must receive the payment with the order form. Credit card orders can be faxed.) You may also email the order information (credit card orders only) to ewr@aps.washington.dc.us. Orders will be processed and shipped within a week of receipt. Please call 202-783-2077 x.3022 with any questions.

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Journals in Experimental Psychology: 1999

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Animal Learning & Behavior

Editor: Ralph R. Miller, SUNY at Binghamton

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Editor: Morton Ann Gernsbacher, University of Wisconsin, Madison

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Opportunities Opening at CSR

Leonard H. Epstein SUNY-Buffalo

Leonard H. Epstein, a Charter Fellow of APS, is a member of the advisory committee for the Center for Scientific Review (CSR), which coordinates the review system of the National Institutes of Health (NIH). He has been an advisor in the reorganization of NIH behavioral and social science study sections (see the February 1999 APS Observer for details). Epstein is a professor in the departments of Psychology, Social and Preventive Medicine, and Nutrition at SUNY-Buffalo.

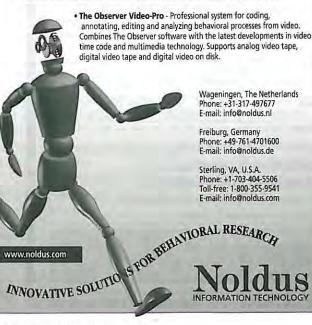
In this column, the first of two, Epstein discusses the need for psychological scientists to participate in the review system, both as scientific review administrators and as study section reviewers. Epstein welcomes comments about issues raised in this column and ideas for the CSR Advisory Committee at lhenet@acsu.buffalo.edu. Contact information for anyone interested in participating in the NIH review system is provided below.

In 1992, three research institutes with substantial behavioral science and neuroscience portfolios—the National Institute on Alcohol Abuse and Alcoholism (NIAAA), the National Institute on Drug Abuse (NIDA), and the National Institute of Mental Health (NIMH)—became part of the National Institutes of Health (NIH). That is, all except their review processes, which did not fully become part of the NIH review system until this year.

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The addition of these institutes, along with numerous advancements that have occurred in the neurosciences and the behavioral and social sciences, prompted NIH to update and reorganize the study sections that reviewed grant applications in these fields. The neuroscience reorganization has been in place since June 1998, and the behavioral and social science reorganization went into effect with the review of grants submitted for the February submission date.

Now that the structure is in place, there is an need for scientific review administrators and reviewers from the behavioral sciences. The quality of review ultimately depends on the quality and commitment of the people involved.

Hail CSR, We Recruit You

The Center for Scientific Review (CSR) is that part of NIH responsible for the peer review of most research applications. CSR is in the process of recruiting a number of new staff, known as scientific review administrators (SRAs) for behavioral science study sections. SRAs are a very important part of scientific review. They are responsible for the acceptance of grants into their study section(s), choosing study section reviewers, assigning grants to reviewers, and ensuring that grants get fair review.

SRAs are also a vital part of the scientific community. The SRA has an unusual opportunity to keep abreast of current science in his or her field, and to be involved in the identification and evaluation of new research to advance science in their area of interest. Attendance at scientific meetings sponsored by professional organizations or NIH provides the SRA with current information of new ideas and developments in their area of expertise, and puts them in touch with leading scientists (and potential study section members).

One thing that eases the transition for SRAs from academic settings is the emphasis on creating a university-like atmosphere at CSR, with Division Heads assuming the role of deans. Initial Review Group (IRG) heads assuming the role of department chairs, and the SRA as "faculty." Professional development is an important theme at CSR, and an experiment is in place at CSR to provide sabbaticals for SRAs' professional development.

In addition to hiring new SRAs, CSR will also be looking for new study section members—the peer reviewers themselves. This recruitment is an ongoing process, but with the reorganization, there is more pressure than usual to identify qualified reviewers for some sections. Some study sections may be filled by existing study section members, while others may need several new reviewers. This is an excellent opportunity for funded investigators who have not had grant review experience to gain that experience. In addition, CSR is increasing the flexibility of appointment terms, which should encourage experienced researchers to make additional contributions to reviewing the science in their fields.

Individuals interested in getting information about SRA positions or serving as a study section reviewer should contact Carol Scibek, (301) 435-1217, 6701 Rockledge Drive, Bethesda, MD 20892; email: scibekc@drg.nih.gov; website: www.drg.nih.gov/review/bssintn.htm.

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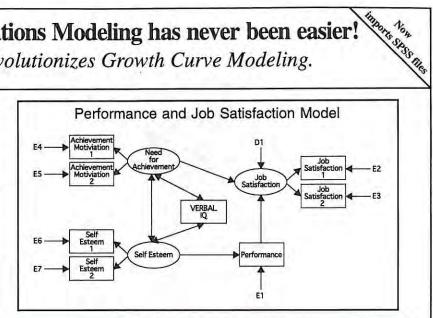
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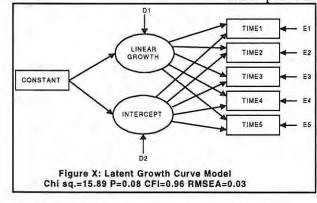
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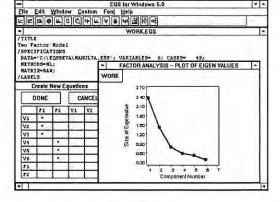


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People

Recent Appointments, Awards, Promotions ...

APS Charter Fellow **Elliot Aronson** of the University of California-Santa Cruz, was named the recipient of the APA Distinguished Scientific Contributions Award for 1998-1999. This is APA's highest honor for research. Aronson, whose research concentrates on social



influence, was given the award for a lifetime of research achievement—inside and outside the laboratory. Over the years, Aronson's experiments have covered a diverse area from social influence, to prejudice reduction, to interpersonal attraction. His experiments have also bridged the gap between basic research and applied research. Over the years, Aronson has received awards for all aspects of his professional activity including the APA Distinguished Teaching Award, the Donald Campbell Award for Distinguished Research, the Gordon Allport Prize, the National Media Award, and the American Association for the Advancement of Science Award for Distinguished Research in Social Psychology. Aronson has served as president of APA's Division 8 and as president of the Western Psychological Association.

APS Charter Fellow **Robyn M. Dawes** of Carnegie Mellon University (CMU) is the Olof Palme Visiting Professor of the Swedish Humanities and Social Research Foundation. He is associated with the psychology departments at both the Universities of Stockholm and Goteborg. In addition to giving invited



talks at these and other universities, he is conducting ongoing graduate seminars in each on the topic of "Irrationality: Theory and Practice." Dawes, the Charles J. Queenan, Jr. University Professor at CMU, specializes in mathematical psychology.

The Nurture Assumption, by APS Member Judith Rich Harris, was one of two runners-up for the 1999 Pulitzer Prize in general nonfiction. This is the second year in a row that an APS Member has just missed winning a Pulitzer: last year How the Mind Works, by APS Fellow Steven Pinker, was a runner-up.



People News Welcomed ...

The Editor invites announcements of noteworthy awards, appointments, etc., for possible publication in the **People** news section of the *Observer*. Send with photo (if available) to: *APS Observer*, 1010 Vermont Ave., NW, Suite 1100, Washington, DC 20005-4907; Email: kbourke@ aps.washington.dc.us.

Secret Science'??? FOIA Access to Research Data (cont.)

In the April Observer, we reported on a new law that would allow Freedom of Information Act (FOIA) access to federally-funded research data. The Office of Management and Budget's (OMB) draft regulations were open for public comment, and APS sent a letter asking that the regulations be withdrawn until the issue could be considered in a fair and open legislative process (the law underlying the regulations was slipped into a massive budget bill at the 11th hour in last year's Congressional session). We objected to the use of the FOIA mechanism for these purposes, noting among other things the potential for abuse and disruption by vested interests who could use this as a way to intimidate scientists or shut down projects they disagree with.

Well, OMB has already gotten a taste of what we were talking about. Shortly before the public comment period closed on April 5th, the comments were running significantly in opposition to FOIA access to research data. But that was reversed by a last minute effort from the U.S. Chamber of Commerce, the Gun Owners of America, and others who generated large numbers of "form" emails and letters that shifted the final count in favor of the regulations.

Their rationale: FOIA access would expose the "phony science" (or alternately, the "secret science") underlying restrictions on industry, restrictions on firearms, and other public policies. Imagine what would happen if that kind of grass roots pressure is brought to bear on individual research grants?

The question now is one of quality versus quantity: Will OMB look only at the number of comments? Unlikely. But the issue has moved into the political arena and the sheer volume of cookie-cutter comments can't be ignored. This whole scene could be replayed in a few months when a revised version of the regulations will probably be issued with another public comment period.

In the meantime, there appears to be support in Congress—particularly among those involved with science policy —for overturning the original law, which would remove the basis for the regulations. APS is encouraging this effort by supporting HR 88, sponsored by Rep. George Brown (D-CA), which would repeal the law. We'll keep you posted as things develop.

APS's letter and the April Observer article are on the APS Website at <u>www.psychologicalscience.org</u>

For the Record

The affiliation of Bruce M. Beltt, of the Leo A. Hoffman Center, was misstated in the Letters to the Editor Column in the March 1999 *APS Observer*.

APS OBSERVER American Psychological Society

Satellite Symposium: AIDS Impact 1999 Drug Abuse and AIDS: Intertwined Epidemics

Thursday, July 15, 1999 9:00 AM-3:45 PM Westin Ottawa

Speakers

Warren Bickel, Ph.D. Needle-Sharing in Heroin Addicts: An Underlying Psychological Process

Paul Cheney, Ph.D. Animal Models of AIDS-Related Behavioral and Neurological Impairment

Margaret Chesney, Ph.D. Adherence to HIV Therapy: Challenges from Substance Use and Proposed Strategies for Change

Michael Clatts, Ph.D. Transmission Risk in Injection Paraphernalia: Heating Drug Solutions May Inactivate HIV-1

Igor Grant, M.D. Neurobehavioral Consequences of HIV Infection

Martin Schechter, M.D., Ph.D. Do Needle Exchange Programs Increase the Spread of HIV Among Injection Drug Users? An Investigation of the Vancouver Outbreak

Michael Stein, M.D. HIV-1-Infected Drug Users in Medical Care: **Behavioral Challenges**

This satellite symposium, sponsored by the National Institute on Drug Abuse (NIDA), National Institutes of Health (NIH), will characterize some of the unique problems associated with drug abuse and HIV/AIDS.

Grant Opportunities

NIDA staff will discuss NIH research grant opportunities, including mechanisms designed to foster career development and unique opportunities for foreign investigotors. Information will also be provided about NIDA's programmatic interests related to HIV/AIDS and drug abuse.

Registration is free, but seating is limited. For registration information, contact by June 25, 1999:

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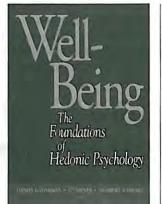
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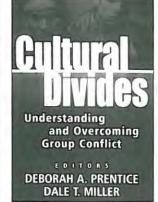
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TEACHING TIPS provides the latest in practical advice on the teaching of psychology and is aimed at current and future faculty of two- and four-year colleges and universities. TEACHING TIPS informs teachers about the content, methods, and profession of teaching. Chief editor Baron Perlman and co-editors Lee McCann and Susan McFadden, all of the University of Wisconsin-Oshkosh, welcome your comments and suggestions. Send article ideas or draft submissions directly to Baron Perlman, TEACHING TIPS Editor, Dept. of Psychology, Univ. of Wisconsin-Oshkosh, Oshkosh, WI 54901-8601; Tel.: 920-424-2300; Fax: 920-424-7317; email: perlman@uwosh.edu

TOMORROW AND TOMORROW AND TOMORROW: Teaching the Future of Psychology

Barry D. Smith University of Maryland

- For I dipped into the future, far as human eye could see,
- Saw the Vision of the world, and all the wonder that would be...
- Yet I doubt not through the ages one increasing purpose runs,
- And the thoughts of men are widened with the process of the suns.

Alfred Lord Tennyson (1842). Locksley Hall, l. 119.

Particularly apropos as we rapidly approach a 21st century that promises a bright future for our young science of psychology. Students need and want to know just what the next century of psychology is likely to bring, and their curiosity about the future provides a powerful pedagogical tool.

Most of us teach primarily about past and present developments in psychology, which is certainly consistent with what most textbooks offer our students. Moreover, what we might consider recent developments can seem like ancient history to a freshman born c. 1980. My own consciousness about this issue was raised several years ago during my lecture on learning processes in an introductory psychology course. I was deeply immersed in the historically important work of Pavlov, Thorndike, Hull, and Skinner when an excellent student, who always sat in the front row, began to snore loudly. The resulting laughter awakened the now redfaced student, and he apologized, but I vowed to find more interesting ways of teaching about great theories and bodies of research.

Teach the Future to Capture the Past

I soon discovered that one solution to this problem—particularly salient as the Millennium approaches—is to use student interest in the future to teach about the past and present (Smith, 1998). We might call this approach *scientific futurism*—using scientific principles and knowledge to predict future progress. For example, I can talk about the likely future developments in neural networking and neurophysiology as a basis for learning and cognition, then show how the major learning theories have contributed to the exciting future of this field.

I've found that frequent reference to likely developments down the road makes a number of contributions to the teachinglearning process:

• It increases the perceived **relevance** of much of the course content. Whether a student is 18 or 30, her career—the reason she's in college—is ahead of her. In fact, it is primarily in the 21st century, and looking ahead in psychology is therefore far more salient for most students than looking back.

• It changes the teaching-learning process from passive to **active** because students are forced to use historical information to predict and assess future developments.

• It increases student **interest** in the overall topic. Discussions tend to be much more dynamic, and students participate more energetically as they try to gaze into the scientific crystal ball and predict the future from the past.

• It focuses attention on the historical or current subject matter at hand. My experience is that students listen more carefully and effectively to a lecture on Freud or Festinger when they know that these historical theorists will be important in a discussion of future prospects.

• It provides a **useful frame of reference**—an organizing schema for learning about research and theory. A lecture on the neural mechanisms of vision is far more interesting to many students when their frame of reference is the attempt to treat blindness by using a video camera to send visual signals directly to electrodes implanted in the occipital cortex, bypassing the eyes (work that actually began in the 1970s).

• It helps to teach **critical thinking**. For example, what are the most likely future treatments for major depression? Students must use available information on causes of the disorder and effectiveness of current biological and psychological treatments to think critically about developments in the 21st century.

• It helps to teach **ethical principles**. For example, as we learn more about the causes of anxiety disorders, we may well be able to develop new therapies that are far more effective than current ones but expensive to administer. Students might be asked to consider any ethical issues such developments would raise. They might discuss the issue of accessibility to underserved popu-



lations and the need for psychologists to be involved in making effective new therapies widely available.

Scientific Futurism that Works

Over the past several years, I've tried a number of approaches to future-oriented teaching, particularly in large introductory psychology courses with discussion sections. I certainly don't use this future-oriented pedagogy for all topics or in all class sessions, but I'll outline here some of the approaches that seem to work. Of course, not all these strategies work for all students.

The Scientific Crystal Ball

In this classroom exercise, I (or my TAs) raise specific questions about likely future developments. We point out that, like clairvoyants, students are being asked to predict the future. However, the crystal ball they use must be a scientific one: They must defend their speculations on the basis of what they have learned (or can learn) about existing research and theory (Smith, Levine, & Wilken, 1998).

As an example, I might ask students to look ahead to possible 21st century treatments for schizophrenia. A student might respond that genetic engineers will insert genes to prevent the disorder or that new drugs will permanently alter brain dopamine receptors or production. I will then ask him to defend those predictions by talking about prior and current theory and research that led to his hypotheses.

Future Applications

Another pedagogical strategy is to ask students to speculate about future applications of current or developing knowledge in psychology. The general approach here is to point out that psychologists have developed a considerable body of knowledge in the area of _____, then ask how that information might be applied to the solution of practical human problems.

One example comes from developmental psychology. Despite the rapid graying of the population, most 18-year-olds have little active interest in the aging process (after all, they'll never be that old!). To enhance their interest, I may ask them to determine the principal cognitive problem in aging and then indicate how it might be addressed in the future by applying and expanding upon what we already know about cognition and memory. The student must first know from the text and lecture that a reduction in shortterm memory ability is the most common cognitive problem. In order to address this problem, she must also know about principles that have been derived from cognitive theory and research and can be applied to the augmentation of memory. She might then suggest that older people be taught to pay close attention to new material they are learning, engage in distributed practice, elaborative rehearsal, and deep processing, and use chunking, imagery, and context cues to maximal advantage. She might even suggest that later-generation acetylcholineenhancing drugs, representing improvements on such current drugs as physostigmine and tacrine, may eventually be used to improve memory.

Thinking Critically about the Future

Another teaching technique, and one I find especially useful, is to present exercises in which students think critically about future developments in specific areas. In this case, I provide a summary of relevant background information that they have read or heard about in the course, drawing on a variety of related material and providing some integration. The student is then asked to complete the critical thinking exercise. He first formulates one or more specific hypotheses about future developments, then responds to a series of critical thinking questions: (a) What are my hypotheses or predictions? (b) What evidence supports my predictions? (c) Are there alternative interpretations of that evidence? (d) Is additional evidence needed? (e) How good is my prediction likely to be?

Students usually find this exercise interesting, and the need to review relevant material reinforces what they are learning about the literature from reading and lecture. The added bonus is that they are practicing critical thinking, which I teach from day one of the course.

An example of this exercise is to ask how television programming should or might be changed in the future, given the evidence that violent programs increase violence in society. These days I usually pair this with the related question of changes in and control of Internet offerings. And I point out that children spend an average of 15,000 hours watching television (and increasing amounts of time on the Internet), as compared with 11,000 hours in the classroom, and see five violent acts every hour. To think critically about future developments, students must know about the relevance of Bandura's observational learning theory. They must also be aware of research documenting the role of television in societal violence and of evidence concerning the effects of other such exposures as violence in the home, neighborhood, and school.

Future Interventions

Many psychologists deal at various levels with the development of more effective methods for changing the behavior of the individual criminal, patient, client, or employee. In the context of a discussion of treatment for psychological disorders or of behaviorism or even neuroscience, I might ask students to predict future developments in intervention. Will we find ways to better modify and control behavior and what might those be?

As an example, I might ask about future possibilities for dealing with the behavior of a patient who is subject to unpredictable rage attacks. The student may speculate that we will implant electrodes in the amygdala (which has already been done) or perhaps perform psychosurgery to create a tiny lesion. I will then ask her to summarize existing research from the text or lecture that led her to those conclusions. In this case—and in any discussion of behavior control—I also address the ethical issues that this possibility raises.

Interviews with Experts

Students can be assigned to assess likely future developments by interviewing an expert, usually a professor in the department, about the future of his field. To prepare for the interview, students must learn as much as possible about the expert's field from the text and outside readings and also learn something about the cognitive science literature that deals with how experts think.

An example here might be the future of psychotherapy, Given the managed

SEE TIPS ON PAGE 25

Department Profile

DEPARTMENT PROFILE informs the research community about faculty, programs, research, and activities in psychology departments across the country and around the world. This feature is designed to give *Observer* readers a taste of what is happening outside their own environment. The *Observer* welcomes psychology departments to submit their department for inclusion in the profile. Contact: Editor, APS *Observer*, 1010 Vermont Avenue, NW, Suite 1100, Washington, DC 20005-4907; or by email at ewr@aps.washington.dc.us.

Georgia Institute of Technology

The Georgia Institute of Technology, known commonly as Georgia Tech, specializes in science and engineering and is located on a large attractive campus in the heart of Atlanta—the cultural, financial, and technological center of the South. The student body consists of approximately 14,000 students, 3,500 of whom are graduate students. Georgia Tech undergraduates consistently rank in the top two to three of all state universities in incoming SAT scores. Information about Georgia Tech can be found at its web site http://www.gatech.edu.

School of Psychology

The School of Psychology is in the College of Sciences, reflective of the strong scientific orientation of its programs. Psychology has benefited from the fact that development of the sciences is a focus of Tech's strategic plan. The School has hired several distinguished senior faculty in recent years, is currently looking for four new faculty, and within the next two years will move into a completely renovated building that is one of the historical landmarks in the center of campus. The School is composed of three overlapping programs: Industrial/Organizational; Experimental; and Engineering/Applied Experimental. A significant and productive theme running through all three programs is human aging. The School's website is http://www.psychology.gatech.edu.

Chair

Randall W. Engle came to Georgia Tech as chair in 1995. His research interests are in individual differences in working memory and attention.

Faculty

PhillipL. Ackerman, Differential Psychology Gregory S. Berns, Cognitive Neuroscience Dorrit O. Billman, Higher Order Cognition Fredda H. Blanchard-Fields, Aging and Social Cognition

Richard Catrambone, Problem Solving Gregory M. Corso, Auditory Perception Elizabeth T. Davis, Visual Perception Randall W. Engle, Memory and Attention Jack M. Feldman, Applied Social Cognition

Arthur D. Fisk, Applied Cognitive Aging Christopher Hertzog, Aging and Cognition

- Ruth Kanfer, Work Motivation and Personality
- Terry L. Maple, Primate Behavior and Environmental Psychology
- M. Jackson Marr, Experimental Analysis of Behavior
- Todd J. Maurer, Employee Selection and Development

Stanley A. Mulaik, Quantitative Psychology Wendy Rogers, Cognition and Aging

Timothy A. Salthouse, Expert Cognition and Aging

Anderson D. Smith, Memory and Aging Jeffrey P. Toth, Unconscious Cognition

Contact Information

http://www.psychology.gatech.edu/

Undergraduate Program

Psychology at Georgia Tech is a science-oriented major requiring a year of biology, a year of either chemistry or physics, and a year and a half of math. The curriculum stresses methodological and quantitative skills as well as foundation courses in psychology so students learn to ask and answer questions about behavior. The low-student-faculty ratio allows nearly all of our 70 majors to work closely in research with faculty. The scientific and quantitative nature of the major and the challenging nature of Georgia Tech's curriculum mean that psychology students are in great demand by industry as well as graduate and other professional schools.

Graduate Programs and Specializations

Graduate Training

Experimental Psychology: Experimental psychology at Georgia Tech emphasizes cognition and behavior but the breadth of the program allows the student to be exposed to a variety of traditional areas in general psychology, as well as the emerging interaction among these areas. The three major research foci in experimental are:

COGNITIVE PSYCHOLOGY: A cognitive theme actually pervades nearly the entire department. Within experimental, research spans the continuum of basic cognitive mechanisms from memory and attention, to higher processes, including thought and problem solving. This program participates in a campus-wide, interdisciplinary program in cognitive science, including scientists from the Colleges of Computing, Engineering, and Architecture.

COGNITIVE AGING: Georgia Tech has a large and distinguished program in this field, with five full-time faculty members focusing primarily on adult development and aging in cognition, and several other faculty with active research interests on related topics, including work and human factors. Training in cognitive aging is supported by a Research Training Grant from the National Institute on Aging. The cognitive aging group coordinates the Cognitive Aging Conference held in Atlanta every two years.

ANIMAL BEHAVIOR: Training in animal behavior involves both laboratory and field studies of animal behavior, using both naturalistic and experimental methodologies. A strong association with Zoo Atlanta provides an excellent laboratory for the behavioral study of many species.

Engineering/Applied Experimental: Engineering psychology focuses on understanding the capabilities and limitations of human performance from the perspective of perception, cognition, and movement control and applying this knowledge to the design of systems and environments that accommodate those capabilities and limitations. Research areas include visual processes and visual attention; skill acquisition, transfer, and retention; individual differences and cognitive performance; development of theoretical underpinnings of human-performance-motivated design of technology; and training and system design for special populations such as older adults.

Industrial/Organizational Psychology: The I/O Psychology program follows the scientist-practioner training model to prepare students for basic research and applied positions related to the psychology of work and the workplace. Faculty research interests span personnel and organizational behavior, including, for example, employee selection, development, and training; job search and reemployment; social-cognitive and cultural influences on performance appraisal; and adult intelligence/knowledge influences on skill learning and performance across the lifespan.

Research

The School of Psychology conducts research on a wide range of topics. Current projects study:

- the influence of personality and cognitive abilities on work-related motivation, training, and performance
- aging-related differences in cognition and the role of experience and knowledge in minimizing everyday consequences of those differences
- reproductive behavior of giant pandas in their native habitat
- the interplay between conscious and unconscious forms of attention, learning, and memory
- individual and age related differences in metacognition and memory
- factors that lead to continuous learning and development of workers
- ability, motivation, personality, and self-concept determinants of skilled performance
- influence of context on age-related declines in episodic memory
- the role of automaticity in responses to personality measures
- principles that characterize psychologically 'good' concepts
- human factors interventions for telemedicine and home health care devices for the elderly
- social cognition in adulthood and aging
- problem solving in math and science
- the relationship between working memory, controlled attention and intelligence
- factors affecting successful re-introduction of golden lion tamarins to the wild

Joint/Interdisciplinary Programs

The **Center for Applied Cognitive Research on Aging** is one of six national Edward R. Roybal Centers for Research on Applied Gerontology that were established in 1993 by the National Institute on Aging to help keep older people active, independent, and productive. The theme of the center research is aging and medical information processing with a focus on how age-related differences in cognitive function may affect medical decisions, use of medical devices and telemedicine, and the ability to comprehend and comply with physician and product instructions.

The Human Computer Interaction (HCI) Program involves the College of Computing, the School of Psychology, the School of Literature, Communication, and Culture, and other departments. Students doing research in HCI receive PhDs in their "home" departments while actively working with various faculty and labs involved in the program. A new Masters Program in HCI has been developed. The program provides students with the practical skills and theoretical understanding they need to become leaders in the design, implementation and evaluation of the computer interfaces of the future.

The **Graphics**, **Visualization and Usability** (GVU) Center involves faculty and graduate students from 11 affiliated departments collaborating on research projects in animation, virtual reality, design, usability, multimedia, digital culture, internet tools, education, and future computing environments.

Cognitive Science involves faculty and students from multiple academic units and is designed to promote faculty and student interaction regarding cognitive science, broadly defined. The program offers undergraduate and graduate certificates with students taking a tailored curriculum of courses in Cognitive Science and in the allied disciplines.

The Director of **Zoo Atlanta**, Terry L. Maple, holds an endowed chair in the School of Psychology. Several of our undergraduate classes include labs taught at the Zoo, the Zoo funds several graduate students each year and numerous research projects involve animals in the Zoo as well as in their native habitat.

The Emory Medical School-Georgia Tech Biomedical Engineering Program was established for joint training and research and is particularly relevant to the emerging focus in cognitive neuroscience.

APS Members In the News . . .

In recent weeks, the news media have featured APS members on various research-related topics. The members are listed here along with their affiliation, the name and date of the publication/broadcast in which they were quoted/ mentioned, and a brief description of the topic. The *Observer* urges readers to submit such items for publication in future issues of this column. Email your listing to: kbourke@aps.washington.dc.us

Ralph Adolphs, Univ. of Iowa, The New York Times Magazine, Feb. 28, 1999: Fear

Toni C. Antonucci, Univ. of Michigan, *The New York Times*, Mar. 21, 1999: Happiness and retirement

Linda Bartoshuk, Yale Univ., The New York Times, Apr. 13, 1999: Human taste

Aaron T. Beck, Univ. of Pennsylvania, The New York Times Magazine, Feb. 28, 1999: Fear

Orville Gilbert Brim, The MacArthur Foundation, *The New York Times*; *CBS Evening News*, Feb. 16, 1999; *NBC Today Show*, Feb. 17, 1999; *USA Today*, Feb. 16, 1999: Midlife development

Jeanne Brooks-Gunn, Columbia Univ., *The New York Times*, Mar. 9, 1999, Discussing sex with children

Kelly Brownell, Yale Univ., The Washington Post, Apr. 4, 1999: Children and nutrition

Maggie Bruck, Johns Hopkins Univ., *The New York Times*, Mar. 23, 1999: Children and eyewitness testimony

Brad Bushman, Iowa State Univ., The New York Times, Mar. 9, 1999: Aggression; The Washington Post, Mar. 29, 1999: Venting anger

Elizabeth D. Capaldi, Univ. of Florida, *Chronicle of Higher Education*, Feb. 26, 1999: Financial incentives for productivity and quality

Joan Chrisler, Connecticut College, *The Washington Post*, Apr. 13, 1999: Eating disorders

Andrew Christensen, Univ. of California-Los Angeles, *newsweek.com*, Apr. 12, 1999: Conflict in marriage

Michael Corballis, Univ. of Auckland, Newsweek, Mar. 15, 1999: Communication and hand gestures

Carolyn Pape-Cowan, Univ. of California-Berkeley, *newsweek.com*, Apr. 12, 1999: Marriage and the birth of the first child

Philip Cowan, Univ. of California-Berkeley, newsweek.com, Apr. 12, 1999: Marriage and the birth of the first child Peter B. Crabb, Penn State Univ., The New York Times, Feb. 28, 1999: Taxes and technology

Mihaly Csikszentmihalyi, Univ. of Chicago, *The* New York Times, Apr. 13, 1999: Exercise enjoyment

Michael Davis, Emory Univ., The Atlanta Journal and Constitution; March 15,1999: Fear and anxiety

Paul R. Duberstein, Univ. of Rochester Medical Center, *The New York Times*, Feb. 17, 1999: Personality and suicide

Paul Ekman, Univ. of California-San Francisco, newsweek.com, Apr. 12, 1999: Interchange between spouses

Ellen Flannery-Schroeder, Temple Univ., *The Washington Post*, Apr. 13, 1999: Eating disorders and young girls

Allan Geliebter, Columbia Univ., Reader's Digest, May 1999: Obesity

Barry Gordon, Johns Hopkins Univ., The Washington Post, Mar. 8, 1999: Distractions while driving

John Gottman, Univ. of Washington, Chronicle of Higher Education, Feb. 26, 1999; newsweek.com, Apr. 12, 1999; Good Morning America, Apr. 13, 1999: Marriage

Roger P. Greenberg, SUNY-Health Science Center-Syracuse, *The New York Times*, Mar. 21, 1999; *Science*, Apr. 9, 1999: Placebos

Anthony Greenwald, Univ. of Washington, Mademoiselle, April 1999: Unconscious prejudice

Ruben Gur, Univ. of Pennsylvania, Reader's Digest, April 1999: Female brains and emotion

Jill Hooley, Harvard Univ., The New York Times Magazine, Feb. 28, 1999: Fear

Neil Jacobson, Univ. of Washington, newsweek.com, Apr. 12, 1999: Conflicts in marriage

Janice Juraska, Univ. of Illinois, Los Angeles Times, Feb. 23, 1999: Brain growth

Jerome Kagan, Harvard Univ., The New York Times Magazine, Feb. 28, 1999: Fear

Alan G. Kraut, The American Psychological Society, *The Washington Post*, Mar. 22, 1999: Behavioral science research

Margie Lachman, Brandeis Univ., *The New* York Times; CBS Evening News, Feb. 16, 1999; NBC Today Show, Feb. 17, 1999: Midlife development

Depsi Laverick, UMDNJ-Robert Johnson Medical School, *Daily Telegram; National Radio*, Mar. 9, 1999: *BBC Radio* March 15, 1999: Soothing stress

David Leavens, Univ. of Georgia, *Newsweek*, Mar. 15, 1999: Communication and hand gestures

Salvatore R. Maddi, Univ. of California-Irvine, Reader's Digest, May 1999: Stress management

Elizabeth Mazur, Eastern Kentucky Univ., CNN, Mar. 3, 1999; foxnews.com, Mar. 12, 1999: Children and divorce

Helen Neville, Univ. of Oregon, *Newsweek*, Mar. 15, 1999: Communication and hand gestures

Elizabeth Phelps, Yale Univ., The New York Times Magazine, Feb. 28, 1999: Fear

J. Edward Russo, Cornell Univ., Reader's Digest, May 1999: Decision making

Carol Ryff, Univ. of Wisconsin, The New York Times; CBS Evening News, Feb. 16, 1999; NBC Today Show, Feb. 17, 1999: Midlife development

Angela Scarpa, Virginia Tech, *PBS At Issue*, March 28, 1999: Sex offending causes and rehabilitation.

Daniel L. Schacter, Harvard Univ., PBS's Exploring Your Brain, Mar. 28, 1999: Memory

Nancy L. Segal, California State Univ.-Fullerton, *Dateline NBC*, Mar. 30, 1999: Nature and nurture, twin studies

Martin Seligman, Univ. of Pennsylvania, American Psychologist, February 1999: Academia

Bennett Shaywitz, Yale Univ., Reader's Digest, April 1999: The brain and gender

Donald T. Stuss, Univ. of Toronto, *The Washington Post*; *Discovery Channel; CBC Morning Radio, The Toronto Star*, Apr. 5, 1999 : Humor and the right frontal lobe

Peter Suedfeld, Univ. of British Columbia, Reader's Digest, May 1999: Solitude

June Tangney, George Mason Univ., The Washington Post, Mar. 29, 1999: Anger

Paul J. Whalen, Saint Michael's College, The New York Times Magazine, Feb. 28, 1999: Fear

Everett Worthington, Virginia Commonwealth Univ., *Time Magazine*, April 5, 1999: Forgiveness

APS Members Elected to National Academy of Sciences

Three APS members were among the 60 new members and 15 foreign associates recently elected to the National Academy of Sciences (NAS). John R. Anderson of Carnegie Mellon University, Robert Desimone of the National Institute of Mental Health (NIMH), and Elizabeth Spelke of the Massachusetts Institute of Technology (MIT) were all recognized by the Academy for their distinguished and continuing achievements in original research.

NAS is a private organization of distinguished scientists and engineers dedicated to the furtherance of science and its use for the general welfare. It was established in 1863 by a congressional act of incorporation signed by Abraham Lincoln and its mission has been to act as an advisor to the government, upon request, in any matters of science and technology.

Today, that mission remains the core charge of the Academy and the sister organizations that have grown up around it: the Institute of Medicine, the National Academy of Engineering, and the National Research Council, which serves as the research arm of these institutions and draws on the scientific talent in the individual academies to conduct the scientific studies and surveys for which NAS is known.

This year's election brings the total number of active NAS members to 1,825—a long way from the initial 50 members NAS had in Lincoln's day. Foreign Associates—non-voting members of the Academy who are not

American citizens now number 313.

The Psychology Section has about 80 members—almost all of which are APS members. Psychologists



Anderson

make up about 4 percent of the total NAS membership.

"My strongest feeling is that of being honored by the selection," said Anderson. "Perhaps my strongest professional goal has been to see the finest research on learning and cognition brought to bear on issues of education. It has certainly been my greatest frustration that this has happened so little. I hope my election to the Academy might enable me to facilitate a little further progress in that direction."

Anderson, who earned his doctorate in from Stanford in 1972, joined the Carnegie Mellon faculty in 1978. His research interests involve understanding how people organize knowledge they acquire from their diverse

experiences to produce intelligent behavior. This has led to the focus on unified theories of cognition—a cognitive architecture that can perform in detail a full range of cog-



Desimone

nitive tasks. He is the creator of the theory of cognition called ACT-R that takes the form of a computer simulations capable of performing and learning from the same tasks that subjects work at in his laboratories. His research has let to the creation of computer tutors for mathematics that were first experimented with in the Pittsburgh schools.

"I am very pleased at the strengthening of behavioral neuroscience and psychology in the Academy," said Desimone, who last year was named Scientific Director of the Intramural Research Program at NIMH. He earned his doctorate in psychology and neuroscience at Princeton University and joined NIMH as a staff fellow at the Laboratory of Neuropsychology in 1980.

"My own research has focused on the neural basis of perception, attention, and memory using neurophysiological methods in monkeys and, most recently, using brain imaging in humans," he said. "Current work has identified a c o m m o n competitive circuit in several cortical areas which, we believe, m e d i a t e s



Spelke

many of the behavioral phenomena of selective attention. As Scientific Director of NIMH, I hope to see greater application of research findings from basic neuroscience and behavior in our efforts to treat the terrible problems of mental illness."

Spelke is a member of the Department of Brain and Cognitive Sciences at MIT. She received her doctorate from Cornell University in 1978. Her research probes the origins, development, and nature of human knowledge of space, number, and material objects. She has contributed to the understanding of the perceptual and cognitive capacities of human infants, including infants' abilities to relate what they see to what they hear, to represent hidden objects, to reason in distinctive ways about inanimate object motion and human action, and to apprehend numerical and geometrical properties of the environment. She also has explored how distinct, early-developing cognitive systems interact to support new systems of knowledge in children and adults.

"I'm honored and delighted by the election as a developmental psychologist, a cognitive scientist, and a would-be cognitive neuroscientist who sees these three fields coming together in some exciting new ways," said Spelke. "I'm also very proud to be joining Eleanor J. Gibson and Ulric Neisser as Academy members: They are my teachers and continue to inspire me. Finally, I'm happy to see the Academy open its doors to one more scientist who is also a mother. I've always felt that my children, Bridget and Joe, made me a better scientist as well as a much happier person, and I'm thankful to both of them."

New Staff Join the APS Office

It's been a very busy springtime at APS with the arrival of five new employees. APS welcomes them all.

heresa McAuliffe joined the American Psychological Society in April as the newest addition to the Society's Membership Department as Director of Membership. Theresa comes to APS from the Building Service Contractors Association International (BSCAI), where she spent two years directing the Membership and Information Central Departments. While at BSCAI, Theresa managed the Association's membership and marketing efforts. Prior to working at BSCAI, Theresa spent eight years with the American Society of Addiction Medicine (ASAM). She began working at ASAM while attending graduate school and ultimately headed up the Society's membership, certification, publications, and state chapters programs. During her first week at APS, Theresa's enthusiasm was obvious: "I am happy to be part of the APS team as the Membership Director. The Membership Department here is outstanding, and I look forward to working with everyone to expand our membership base," she said. Raised mostly in the DC area, Theresa received her Bachelor's degree from Mount Saint Mary's College. As an undergraduate, Theresa majored in English Literature and minored in German and American Studies. She received her Master's degree in English Literature from the University of Maryland.

vetlana Baranova, a native of Moscow, Russia, joins APS as Member ship Assistant. Svetlana has called the United States her home for the last two years. In the position of Membership Assistant, Svetlana's responsibilities include entering membership data into the APS Member database, responding to and sorting incoming membership related email, and assisting in APS mailings. Svetlana's voice will often be the one members hear when they require assistance with their membership. "I have really enjoyed working with the APS staff and the APS members," she said. Svetlana is also a full-time sophomore at Strayer College in Washington, DC. She is majoring in computer information systems programming.

amiko Gary joined APS in March as Receptionist/ Office Assistant, Tamiko comes to APS from the Ronco Consulting Corporation where she was the administrative assistant in charge of purchasing, invoices, and liquidation vouchers. Tamiko was raised in Prince George's County, Maryland, and she graduated from Laurel Senior High School. After graduation, she enlisted in the U.S. Marine Corps for four years. "The Marine Corps was a great experience for me," she said. "That is

where I gained my administrative skills and computer knowledge."Tamiko is very happy about being a part of APS. "I look forward to learning all I can about how to best serve our members," she said. When not at work, Tamiko spends all of her free time with fiveyear-old son Derick Jermaine. Tamiko also enjoys bowling, community volunteering, and reading.

rika Davis is one of two new additions to the APS Meetings Department. She takes over as Meetings Manager at an especially busy time as APS prepares for the 11th Annual APS Convention. As Meetings Manager, Erika will be running on-site registration at the convention. A graduate of Howard University, she received her Bachelor's degree in communications. Erika began her professional career while still at Howard when she and a friend began organizing events for students in an effort to raise tuition and spending money. In early 1996, Erika took her event planning experience to the government. She joined government contractor Dakota Technologies and handled all of the logistics for



New faces at APS include (from left to right): Svetlana Baranova, Tamiko Gary, Erika Davis, Sima Kumbongsi, and Theresa McAuliffe.

Head Start's biennial National Research Conference.

ima Kumbongsi joins the Meetings and Communications Departments as Administrative Assistant. In this capacity, Sima will support both departments in a variety of ways including providing correspondence, data entry, editorial, and marketing assistance. As a contact person for both departments, Sima will be answering questions regarding the Annual APS Convention as well as Observer advertising deadlines. Sima recently graduated from the University of Maryland-Eastern Shore with a Bachelor of Science degree in biology. Upon graduation she taught science to fifth and sixth grade students, and she served as the team leader on her grade level. Her responsibilities included utilizing three modes of learning in her classroom, organizing an in-school science fair, as well as preparing laboratory projects for her students. Sima enjoys reading and exercising in her spare time. She is excited about her new position at APS and is looking forward to this year's convention.

PS veteran staff member Shelley Clay was recently promoted to the position of Database Coordinator. Shelley, who has been at APS for more than two years, has helped thousands of members with membership queries as a Membership Assistant. In her new position, Shelley will be processing members' credit cards, handling database queries for the different departments of APS, taking care of mailing list requests, and entering membership information into the APS Member database.



APS OBSERVER American Psychological Society

MISCELLANY

Rutgers recently presented "Social Identity, Intergroup Conflict and Conflict Reduction," part of their Series on Self and Social Identity sponsored by the department of psychology. During the symposium, researchers explored the role and impact of social identity on intergroup conflicts, questioning whether or not understanding the way people identify with religious, ethnic, national, and cultural groups helps reduce conflicts between different groups that range from racial discrimination to war. An international panel presented talks on such issues as: state sponsored genocide, the Israeli-Palestinian conflict, religious violence in Northern Ireland, black-white tensions in the United States, and friction between national and hyphenated American identities. Charter Fellow Richard Ashmore, symposium co-coordinator stated that "Violence between groups, like the dragging death of an African-American in Texas and the raging ethnic war in Kosovo, is a growing problem facing people in all of the world's societies." Several APS members participated in the symposium including: Charter Fellows Marilyn Brewer and Mahzarin Banaji, and Member B. Ann Bettencourt.

New York University (NYU) recently celebrated a Century of Psychology as the psychology department began its 101st year. Ted Coons, who convened the psychology centennial, noted that, "In a century's time, more than 1,250 PhDs and numerous post docs, MAs and BAs in psychology have been granted by NYU; it is time for alumni to meet with former classmates and faculty mentors before the century turns again." Participants in the Century of Psychology program included: Charter Fellows Ray Katzell and Walter Mischel, Member Margaret Rosario, Fellow Leslie Ungerleider, and Charter Member Sheldon Zalkind.

The National Institute on Drug Abuse (NIDA) highlighted gender differences in drug addiction and treatment in a recent issue of NIDA NOTES. APS Charter Fellow and NIDA Director, Alan I. Leshner said "basic behavioral and neurochemical research has suggested that women may be more sensitive than men to the rewarding effects of drugs, perhaps due to differences in brain chemistry." In a related article, recent NIDA-funded studies have found that women in drug abuse treatment relapse less frequently than do men, at least partly because women are more likely to engage in group counseling.

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www.academicpress.com/creative



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The Student Notebook ______ Karen M. Falla & Editor Conducting Research on the Web

Suzanne Altobello Nasco APSSC Volunteer Coordinator

The continual advancement of computer technology and the increase in Internet usage by the general public provides intriguing opportunities for researchers in all areas of psychology. Many psychologists are now taking advantage of this innovative medium to conduct a variety of research projects, from personality tests to surveys to experiments in visual perception. The world wide web offers both advantages and disadvantages to traditional means of data collection.

The primary advantages to conducting research on the Internet are population access, low cost, speed of response, and dynamic interaction with participants (Schmidt, 1997). Psychologists conducting research on the web have access to large populations of individuals and are not constrained to a single geographic location in which to conduct their research. In addition, researchers can investigate specialized populations, such as persons with specific illnesses, disabilities, ethnicities, religions, hobbies, or interests.

The second major benefit to conducting research on the internet is the low cost of publishing and disseminating a survey or experiment on the web; paper resources are no longer necessary and mailing costs are nonexistent. As a result, the speed with which responses are obtained increases dramatically, along with response rate. Furthermore, the use of sophisticated programming (e.g., computer gateway interface CGI) allows the researcher to customize the submitted data to eliminate the need for data entry. Finally, new interactive software allows the researcher to create a dynamic and engaging environment for participants.

Along with the conveniences the web affords researchers, several concerns arise with web-based data collection. Potential problems include obtaining informed consent, guarding the security of obtained data, and establishing the validity of the research. Since participants cannot provide their signature for informed consent over the internet, researchers must create different ways to obtain consent while maintaining participants' anonymity. Anonymity can be secured by creating separate submissions for consent and data responses or participants can be instructed not to submit their data unless he/she has read and agreed to the informed consent.

Another shortcoming to web-based research is the potential for a participant to submit information multiple times. To maintain confidentiality, researchers should not ask for names or email addresses of participants and, thus, often cannot tell if a respondent has answered more than once. The public nature of the internet allows a viewer to download the source of one's web page and potentially alter the CGI program used to obtain results, thereby compromising the security of the obtained data. Finally, psychologists have been concerned about the validity of web-based research. At the early stages of internet research, the relationship between web-based results and traditional laboratory results was unknown. Recently, however, several studies have demonstrated the convergence between simultaneous weband lab-based projects (Buchanan & Smith, 1999; Pasveer & Ellard, 1998).

The number of surveys and experiments available online has increased dramatically in the past five years and will continue to offer researchers opportunities to advance their theoretical ideas and experimental designs.

For a list of psychological studies being conducted on the internet, please visit the APS website (www.psychological science.org).

References

- Buchanan, T., & Smith, J. L. (1999). Using the Internet for psychological research: Personality testing on the World-Wide Web. British Journal of Psychology, 90, 125-144.
- Pasveer, K. A., & Ellard, J. H. (1998). The making of a personality inventory: Help from the world wide web. Behavior Research Methods, Instruments, & Computers, 30, 309-313.
- Schmidt, W. (1997). World-Wide Web survey research: Benefits, potential problems, and solutions. Behavior Research Methods, Instruments, & Computers, 29, 274-270.

Writing a Professional Web Page

Otto H. MacLin APSSC Communications Director

Just as it is important to know how to write a good vita¹, it is important to know how to write a good professional web page that will showcase who you are, what you have done, and what you can do. It should leave a strong positive impression on the viewer about YOU.

I make the distinction between personal web page and professional web page as many personal web pages are not necessarily something you would want to be evaluated by on a professional basis. Even if you have not sent out your web page address with job applications, an interested party can generally find your site by using a search engine (e.g. search on "otto h. maclin"). Since you will not have control over who views your web page, you may choose to maintain a professional web page. This is not to say that you can't have personal content on your web page, however you may not want to put a picture of your camping trip or of your most recent party on the front page. Remember first impressions count.

What do you want your first impression

to be? Organized, professional, and competent are the best bets. The Internet is a multimedia world with an unlimited number of ways to create web pages. Take advantage of this versatility and create a web page that speaks well for you. Take a look at some student web pages and ask yourself what impression they give about the person².

There are many different style guides available. Their main thrust is organization, consistency, and ease of use for the viewer^{3,} ^{4,5}. Additionally, if you are using a server on

SEE WEB PAGE ON PAGE 35

Getting into Grad School: FAQs

David Samonds Undergraduate Advocate

A s Undergraduate Advocate for APSSC, it has been my job to answer questions for undergraduates looking forward to graduate school. The following are my responses to three of the most frequently asked questions I receive from students. These responses are based on my own experience and I recommend you talk with your department advisor for additional information.

How can I prepare early for graduate school?

First, one of the best ways is to get to know the faculty members in your department. They can be a wonderful resource for answering your questions, as well as providing opportunities for you. Also, when applying to graduate programs in psychology, you will be expected to provide letters of recommendations from faculty members who have first-hand knowledge of your ability.

Second, begin writing your vita, as dates and activities can be easily forgotten. Finally, begin to look at what information graduate programs will require you to submit. Many schools will require you to take the GRE as well as the GRE-Psychology test. Getting a head-start on these tests will help you in the long-run.

What types of things will graduate programs look for?

Unfortunately, there is no avoiding the fact that a strong GPA as well as a solid GRE

score can open up possibilities for you. However, there is also a world full of options that you can select to strengthen your application. Some of the most popular suggestions I have heard are: doing a senior thesis, participating in a Psychology Club, becoming a teaching assistant, or getting hands-on experience through a local support organization. Graduate programs will look for students who actively participate in the field of psychology. My suggestion is to go out and try as many things as you can, and hopefully these experiences can help you decide what you would enjoy doing in the future.

Is it okay to take a year off between undergraduate and graduate school?

I have heard mixed messages on this question, however the general point seems to remain the same. Some schools suggest that experience outside of undergraduate life might be helpful before entering into a graduate program. However, this does not mean that you can just sit around for a year. Schools expect that you will be doing something productive during this time, and if possible, something related to the field of psychology. My suggestion is that if you do choose to take a year off, try to stay involved with the field, and stay in touch with your faculty mentors.

As Undergraduate Advocate for APSSC, I would like to offer my assistance to undergraduates who have questions about applications, internships, etc., or who want to offer suggestions. Please feel free to email me at: dsamonds@student.umass.edu

Hot Site

Ever wondered what a good mentoring relationship should be like? This site is an online book which describes features of successful mentoring relationships. Titled *Advisor, Teacher, Role Model, Friend*, it begins with the historical roots of mentoring and goes on to cover mentoring of undergraduate, graduate and postdoctoral students, and junior faculty in science and engineering. Thanks to Kymberley Bennett for letting us know of this great site.

Visit it today at http://www.nap.edu/readingroom/books/mentor/

Have you run across a web site you think might be of interest to other students? If so, please contact Karen Falla (tfal5939@aol.com)

Visit the APSSC on line at: http://psych.hanover.edu/APS/APSSC/apssc.html

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Each Executive Council Member welcomes students and others to contact them about any concerns relevant to the member's respective office.

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Organizational Profile

Society for Gestalt Theory and its Applications

Origins and Purpose

The Society for Gestalt Theory and its Applications (GTA) is an international scientific association established for the purpose of promoting the Gestalt-theoretical perspective in research and practice. It was founded in 1978 in Germany, and since then has grown to include members from all over the world. Gestalt theory is understood and promoted by the GTA as a broadly interdisciplinary general theory rooted in the research work of Max Wertheimer, Wolfgang Koehler, Kurt Koffka, and Kurt Lewin. For these purposes the GTA publishes the guarterly journal Gestalt Theory An International Multidisciplinary Journal.

Membership

GTA is an international organization with approximately 250 members. Most of the members are psychologists, but the membership also consists of researchers and practitioners from many other disciplines. Membership is open to anyone who is inclined, and is ready, to promote Gestalt-theoretical thought and action in research and application in their respective scientific disciplines. Membership includes the subscription to GTA's bilingual guarterly Gestalt Theory. Applications for membership may be obtained from Michael Ruh, treasurer of the GTA. via the GTA head office, or online at http://www.enabling.org/ia/gestalt/ gerhards. The annual membership fee is 94,60 Euro (student members: 49,60 Euro). Membership entitles members to a reduced participation fee at the scientific conventions of the GTA.

Chairman Vice-Chairman Secretary Treasurer Assessor Hans-Juergen Walter, Biedenkopf Gerhard Stemberger, Vienna, Austria Marianne Soff, Educ. Univ. Karlsruhe Michael Ruh, Rosenthal Gisela Kubon-Gilke, Univ. Darmstadt

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BACKGROUND

GTA exists to promote the Gestalt-theoretical perspective in research and practice. The coming to power of national socialism in Germany substantially interrupted the fruitful scientific development of Gestalt theory in the German-speaking world; its founders and eminent representatives—Koffka, Wertheimer, Koehler and Lewin emigrated, or were forced to flee to the United States.

The GTA views as its main task the provision of a scientific and organizational framework for the elaboration and further development of the perspective of Gestalt theory in research and practice. Gestalt theory in this sense is not limited only to the concept of the Gestalt or the whole, or to the Gestalt principles of the organization of perception, but is understood as essentially far broader and more encompassing.

The epistemological orientation of Gestalt theory tends to be a kind of critical realism; methodologically, the attempt is to achieve a meaningful integration of experimental and phenomenological procedures. Gestalt theory is to be understood not as a static scientific position, but as a paradigm that is continuing to develop.

The GTA every other year sponsors a scientific convention. The languages of the congress are German and English. A portion of the members of the Society is broken down into subgroups—work groups, and a section on psychotherapy ("Gestalt Theoretical Psychotherapy")—the purpose of which is to make the mode of thought

of Gestalt psychology an essential foundation and a useful basis in various fields of application. To date, these fields include psychotherapy, pedagogy, sociology, philosophy, art and design, medicine, and sports.

The official publication of the GTA is the quarterly journal *Gestalt Theory*. An International Multidisciplinary Journal." Published in it are original manuscripts that serve to promote Gestalt-theoretical research and application. It also reprints classical works of historical significance that are not currently readily accessible.

The website of the GTA at http://www.enabling.org/ia/ gestalt/gerhards provides updated information about the goals and purposes and the ongoing work of the Society and related fields of interest.

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TIPS FROM PAGE 15

care pressures to reduce the cost of therapy, will we see greater use of brief therapy, of drugs, of psychosurgery? If so, how will these changes affect the probability of successful treatment and perhaps even the mental health of the population at large?

Reviewing Articles about the Future

A number of psychologists have written articles in which they project some areas of the field into the future. Included are such figures as David McClelland (1996), Roger Sperry (1995), Eleanor Gibson (1994), David Buss (1995), and M. Brewster Smith (1994). I ask students to read one or more of these or similar articles, summarize them, indicate the extent to which they agree with the author and why, and use the article as a jumping off point to go beyond what the author says. They must cite relevant literature from the course to support their points and speculations. I have used this as a writing assignment in both introductory and more advanced courses. However, it is probably better handled by students in the higher level courses.

Discussion Groups

Teams of three to five students within a discussion section or a relatively small course can be assigned to consider the future of each of several areas within a given field of psychology. The groups then present their conclusions to the entire class, citing theory and research to back up their predictions. In studying social psychology, for example, one group might discuss future developments in attitude change, another social influence, and still others could tackle social perception, interpersonal attraction, and prosocial behavior.

More Windows on the Future

I've given a number of examples of topics that lend themselves to the use of scientific futurism as a teaching technique, but there are obviously many more. Here are a few additional examples:

- The role of genetics in normal and abnormal behavior
- Approaches to increasing the rate and amount of learning
- Neural networks as a basis for learning, memory, and cognition
- The development of expert and robotic systems capable of learning and even thinking (already claimed for some systems)
- Brain grafts to treat neuropsychological disorders
- Increasing longevity by inserting genes that re-extend the telomeres on chromosomes, thereby causing cell division to continue beyond the Hayflick limit
- Neurological measures of IQ potential
- Using implanted electrodes and precise psychosurgical techniques, such as cingulotomy and subcaudate tractotomy, to treat intractable schizophrenia, depression, and anxiety disorders.

Ethical Issues in Scientific Futurism

In using scientific futurism to teach various topics in psychology, it is important address actual or potential ethical issues that arise whenever future developments, and particularly applications, are considered. Depending somewhat on the topic, I ask students to deal with the ethical implications of predictions they make about future developments. Some general questions include:

Can an application or development potentially do harm, as well as good, and how might psychologists and society

Barry Smith is professor of psychology at the University of Maryland-College Park, where he has also been acting chair of the Department and director of Undergraduate Studies. The recipient of the Distinguished Teacher/Mentor Award, he has regularly taught introductory psychology, as well as graduate and undergraduate courses in personality, statistics, research design, and clinical biopsychology. He conducts psychophysiological research at the university and in laboratories at the National Institutes of Health (NIH) Clinical Center in Bethesda, Maryland. He has authored and edited several books, most recently *Psychology: Science and Understanding* (1998), published by McGraw-Hill. The author can be reached at 301-405-5860, Fax: 301-314-9566, email: smith@bss3. umd.edu deal with that possibility?

- Will certain groups be disadvantaged by limited access to improvements and how can that be prevented?
- What approaches should be used to ensure that a new application is safe and effective?
- What might happen if we go too far in our attempts to use scientific knowledge from psychology to solve individual or social problems?
- How can we ensure that the rights of the individual will not be violated by future developments in our field?
- How can we be certain that new research techniques are ethical?

Conclusion

Scientific futurism is obviously only one of many potentially useful pedagogical techniques and is best used as just one aspect of an overall effort to teach psychology effectively. As pedagogy, it is a thinly veiled attempt to garner student interest and thereby focus attention on the material to be learned. Beyond pedagogy, it provides the student with a glance into the likely future of psychology and promotes critical thinking, creative reasoning, and an appreciation of the importance of grounding progress in sound scientific logic and knowledge. ◆

References and Recommended Readings

- Buss, D. M. (1995). The future of evolutionary psychology. *Psychological Inquiry*, 6, 81-87.
- Gibson, E. J. (1994). Has psychology a future? Psychological Science, 5, 69-76.
- Halpern, D. F. (1996). Thought and Knowledge: An Introduction To Critical Thinking (2rd ed.). N.Y.: Lawrence Erlbaum.
- McClelland, D. C. (1996). Does the field of psychology have a future? Journal of Research in Personality, 30, 429-434.
- McKeachie, W. J. (1994). Teaching Tips: Strategies, Research, and Theory For College and University Teachers (9th ed.). Lexington, MA: D.C. Heath.
- Smith, B. D. (1998). The Scientific Crystal Ball: Teaching the Psychology of the Future. Paper presented at the meeting of the National Institute on the Teaching of Psychology, St. Petersburg Beach, Florida.
- Smith, B. D., Levine, V., & Wilken, J. (1998). Instructor Manual To Accompany Psychology: Science and Understanding. Dubuque, IA: McGraw-Hill.
- Smith, M. B. (1994). Human science—really. A theme for the future of psychology, Journal of Humanistic Psychology, 34, 111-116.
- Sperry, R. W. (1993). The future of psychology. American Psychologist, 50, 505-506.



NIH FROM PAGE 6

Child Health and Human Development, where more senior researchers have been edging out junior investigators in the competition for small grants designed to attract new scientists to child development research.

Last year, the NIH Office of Behavioral and Social Sciences Research began a Congressionally-funded \$10 million initiative on research into mind-body connections. APS is asking Congress to encourage similar initiatives in other areas such as child development, aging, heart disease, and chronic disease, all of which involve a combination of psychological, physiological, and environmental factors. Another possible topic is compliance with medical regimens.

APS also asked Congress to support specific initiatives at various institutes. At the National Institute of Mental Health, there is a need for increased basic behavioral research, and for initiatives that connect basic and applied research in behavior. Full funding is needed for the National Institute on Drug Abuse's National Clinical Trials Network which will test drug strategies—largely based on behavioral and psychological science—in a range of "real life" settings. In addition to establishing a B/START program, NIAAA is expanding its behavioral science portfolio on a number of fronts, including basic research on memory and cognition, social psychology of group identification, and behavioral genetics.

APS asked Congress to encourage an expansion of research in cognitive functioning of the elderly at the National Institute on Aging, and to fund the recommendations of the Congressionally-created Diabetes Research Working Group concerning an increase in behavioral science at the National Institute on Diabetes and Digestive and Kidney Diseases.

Known informally as the "basic research institute," the National Institute of General Medical Sciences is the only national institute specifically mandated to support research not targeted to specific diseases or disorders. Even though it's one of the NIH institutes, there's a reason you may not have heard of it: NIGMS doesn't fund behavioral science research. We're asking Congress to help change that, too. Sarah Brookhart

TESTIMONY FROM PAGE 7

NIH tradition of starting from a disease. When you look at what determines health, you can't help but notice behavior. Smoking, drinking, taking drugs — all begin as behaviors. But in the NIH model, the initial behavior is ignored. It isn't until a person gets lung cancer, emphysema, heart disease, liver damage, brain damage, that the origins of the problem are addressed. And too often the approach is "Okay, it's time for you to quit." And that is easier said than done.

Substance abuse, AIDS, teen pregnancy, violence and the rest are major public health problems. No one is untouched by them. But how much NIH research is being done on the fundamental processes of thinking, motivation, on social development, attitude change, and community or family support underlying these behaviors? What cognitive, emotional and psychological mechanisms are involved when teens ignore the risks associated with substance abuse or unprotected sex? What are the individual and environmental origins of violence? And what are the protective factors that keep so many kids from engaging in these risky behaviors?

The point is, behavior is as threatening to health and well-being as any genetic or biological condition. Certain NIH institutes, such as those for Mental Health, Drug Abuse, Alcoholism, and Aging, recognize this and have been key in promoting the study of behavior at NIH. Yet most NIH officials talk as if they sponsor only biological research. They don't. There is excellent behavioral science work being done at NIH, producing high quality knowledge and breakthroughs that should be a source of enormous pride for NIH. But there isn't enough, and it isn't recognized as a core element in NIH's mission. Just look at the lack of support for behavioral infrastructure needs such as training and instrumentation, the continued reduction in intramural laboratory activities in behavioral science research, and the absence of behavioral scientists at the table when decisions about priorities and resource allocations are being made. I want to close this portion of my testimony by reiterating my strong support for NIH and to underscore to the Committee that my remarks are made in the spirit of wanting to make a great institution even better. I ask the Committee to give its fullest consideration to these concerns and to help make behavioral research more of a priority at NIH.

All of the National institutes support at least a little behavioral science research (one notable exception, NIGMS, is addressed below). While it is not possible to describe the activities of all of the Institutes within the time available, the remainder of my statement will highlight several initiatives of which we would ask the Committee to take particular note.

Training: National Research Service Awards

In its most recent report (1994) on National Research Service Awards, the National Academy of Sciences (NAS) recommended to generally increase NIH stipends and to additionally increase the number of awards for research training in nursing, oral health, health services research and behavioral science be increased. As NIH indicated in a report to you last year, only the stipend increase was implemented. I see this as a primary example of NIH's resistance to behavioral and other less traditional NIH research fields. Training support is essential in all areas of science in order to ensure a future generation of investigators. Yet, NIH has continued to ignore both NAS and Congressional recommendations to increase its training support for behavioral science researchers. Given the importance of training to the vitality of behavioral science research, we ask for the Committee's support in encouraging NIH to develop a plan for complying with the NAS recommendations.

Office of Behavioral and Social Sciences Research

Congress mandated the creation of the OBSSR in 1993. It took two full years for NIH to establish the office. But since then,

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OBSSR has demonstrated exceptional leadership by developing ground-breaking behavioral science initiatives involving joint efforts by NIH institutes. In FY 99, OBSSR is coordinating a \$10 million NIH-wide project on the interactions of the mind and body to determine health. This project has had the strong backing of Congress. We believe it is an exemplary model for joint projects among institutes that share responsibility for behavioral aspects of physical and mental health and disease. We ask the Committee to encourage similar initiatives in areas where psychological, environmental, and biological conditions intersect to determine health status, such as in child development, aging, heart disease, and chronic diseases. One additional area for crossinstitute coordination would be compliance with medical regimens.

In addition, last year Congress expressed concern that OBSSR's budget is "extremely limited." We share that concern, and we urge this Committee to support an increase in OBSSR's administrative budget so that the Office can pursue the kinds of initiatives outlined above.

National Institute of Mental Health

NIMH is one of the largest funders of behavioral research at NIH. In recent years, NIMH has been making great efforts to strengthen and expand behavioral science programs, through reorganization and through initiatives that promote new directions. One example is the National Advisory Mental Health Council's project to improve connections between basic behavioral research and clinical and applied issues. The Advisory Council will be developing recommendations for specific research and training priorities. We ask the Committee to continue to encourage NIMH's support of both basic behavioral research and of initiatives that connect basic and applied research in behavior.

Most recently, NIMH has begun an initiative to increase research that combines public health and behavioral research, in part by increasing connections between academic departments of psychology and schools of public health. We ask the Committee to encourage this initiative as an effective means of increasing the visibility of mental health issues in public health, and the central role of behavior in the origins of and the solutions to problems of public health.

National Institute on Drug Abuse

Under the leadership of psychologist Alan Leshner, NIDA has made dramatic progress in addressing the nation's drug abuse and dependence problems. In FY 99, NIDA launched a national Clinical Trials Network to test drug treatment strategies in "real life" settings. Interventions that have been effective under controlled research conditions will be applied on a wide-scale with a variety of patients in many geographical settings. This network is based on new partnerships among NIDA, treatment researchers, and community-based treatment providers. Initially, most of the interventions being tested are based on behavioral treatments, since those have been found to be most effective. As effective pharmacological interventions are developed, these will be incorporated into the clinical trials network. Given the enormous promise of

this initiative to improve the nation's drug treatment programs and reduce the public health problems associated with drug abuse and addiction, we ask the Committee to fully fund NIDA's Clinical Trials Network in FY 2000.

National Institute on Alcohol Abuse and Alcoholism

NIAAA is expanding its behavioral science portfolio to include basic research of the underlying psychological and cognitive processes involved in alcohol related behaviors. In addition, there are new initiatives in the social psychology of group identification; in behavioral genetics to understand the biological and environmental factors in vulnerability to alcoholism; in the psychophysiology of alcoholism; and in the effects of long-term alcohol abuse on memory.

As part of its expansion, and with Congress' encouragement, NIAAA has established a program of small grants for young investigators. The program, known as Behavioral Science Track Awards for Rapid Transition (B/START-NIAAA), is essential for ensuring the supply of scientists needed to examine the numerous behavioral factors that play a central role in alcohol abuse and alcoholism. We ask the Committee to continue to encourage NIAAA's B/START program. B/START has been used successfully by other Institutes, and we ask the Committee to encourage all NIH institutes make similar use of the B/START mechanism to ensure a supply of behavioral science researchers in areas related to their missions.

I would also like to mention that NIAAA's Advisory Council has established a Subcommittee on College Drinking to examine problems of alcohol abuse, particularly "binge" drinking and drinking with the intent to get drunk, which continue to pose significant problems for college communities. The Subcommittee will identify the context and consequences of college drinking and provide recommendations on the prevention and treatment of the problem. This initiative targets young people at a time when life-long behavioral patterns of alcohol abuse may be established. We ask the Committee to support NIAAA's College Drinking Initiative.

National Institute of General Medical Sciences

NIGMS is the only national institute specifically mandated to support research not targeted to specific diseases or disorders. NIGMS does not now support behavioral science research or training, even though there is a range of basic behavioral research and training that NIGMS could be supporting in such areas as the fundamental relationships between the brain and behavior; auditory and visual perception; social processes, basic cognitive processes such as motivation, learning, and information processing; the development of research techniques, methodologies, and analyses; the behavioral underpinnings of chronic pain; and the connections between mental processes and health. We believe NIGMS should develop a basic behavioral science research program in consultation with the behavioral science research community and other national institutes and offices. We ask the Committee to encourage development of a plan for basic behavioral science research at NIGMS.

CONTINUED ON NEXT PAGE

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National Institute on Aging

Cognitive functioning is one of the most important aspects of health status in the elderly. A study underway at the Institute of Medicine is examining current knowledge in the area of cognition and aging in order to identify future directions for behavioral, cognitive, and neuroscience research in this area. We ask the Committee to encourage the use of the IOM's recommendations as a guide for expanding NIA's portfolio in this critical area of research.

National Institute on Diabetes and Digestive and Kidney Diseases

Congress recently received the report of the Congressionallymandated Diabetes Research Working Group. Among other things, the report recognized the role of behavioral research in preventing diabetes and in controlling various behavior-based aspects of this chronic disease, such as adherence to diabetes treatment and improving health-related behaviors to avoid or slow the deterioration in health that can result from diabetes. We ask the Committee to encourage NIDDK's implementation of the Diabetes Research Working Group's behavioral science recommendations.

FUTURE.COM FROM PAGE 3

leading "futurists," has used scenarios with some of the world's largest businesses and government institutions to help them understand how the world might turn out tomorrow so that they can make appropriate choices today.

One future world is called "The Long Boom," and it would, if realized, have enormous ramifications for the lives of psychological scientists. It is based upon what we already know about technology, especially computers and telecommunication. The long boom predicts more and more personal computers entering the home (that's an easy one), but more interestingly, with the power of computer chips growing exponentially, everything "comes with a small, cheap silicon brain." So handwriting recognition becomes a snap. Simultaneous language translation is a breeze.

The long boom thinking about education at all levels assumes clear recognition on the part of our political leaders that a strong educational system is vital to our national interest. Entrepreneurs could enter the educational world, devising new schools, new curricula, new teaching methods. In higher education, the adoption of networking technologies may have even greater benefits. Imagine "Project Gutenberg," by the turn of the century, having put tens of thousands of books online. Imagine a world a few decades later where all new books come out in electronic form, and virtual libraries are up and running. The children who are born today—the future psychologists of tomorrow—will be children who have spent their networked lives steeped in this new technological world.

This future world will change the way we teach and conduct research, but will also bring new problems to solve. How, for example, will we protect the rights of the "inventions" of psychologists, particularly their intellectual property? The sheer magnitude of changes that will accompany our new networked, global scientific community is worth thinking hard about today. It's good to see that important institutions, like Dartmouth, are already taking the initiative to help us do this right. ◆

National Institute on Child Health and Human Development

NICHD is undertaking a number of initiatives to increase understanding of the behavioral and cognitive aspects of the child development. These focus on behavioral development; cognitive research on how children learn; developmental aspects of emotions and self-regulation; and the role of parents in determining children's cognitive, social, and risk-taking behaviors. In addition, NICHD now promotes small grants to attract new investigators to child development research.

However, it appears that more senior investigators are applying for this mechanism, which is attracting established investigators to the field, but does not address the need to support young investigators who will be the future workforce in this area. The B/ START mechanism I described earlier would be especially appropriate in this instance. We ask the Committee to encourage NICHD's use of B/START small grant awards, as used by NIMH, NIDA, NIAAA, and other institutes, to encourage interest among young investigators more directly.

This concludes my statement. Thank you for the opportunity to appear before you. I would be pleased to answer questions or provide additional information. \blacklozenge

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LETTERS FROM PAGE 4

mental Psychology in 1957. Some of my experiences may be useful in the present discussion.

Contemporary sleep research, from its outset, has been multidisciplinary. I once wrote: "Contemporary sleep research continues to be the step child of many disciplines, but the central focus of none. Researchers have been drawn a wide range of primary disciplines including biochemists, biologists, endocrinologists, neurologists, pediatricians, pharmacologists, physiologists, psychiatrists, psychologists, and engineers." Generally, sleep researchers have independently applied their disciplinary skills. Interdisciplinary research has been typically focused on a problem or set of problems that demands cross disciplinary expertise.

As a consequence, sleep research has been conducted on two essentially independent tracks; intraorganismic (neurophysiology, biochemical, and pharmacological) and behavioral. The intraorganismic scientists have been receptive to the advances in physiology and the neurosciences. Those with behavioral orientations have been responsive to such behaviorally centered problems as biological rhythms, shift work, and traffic accidents. My contributions to the area have been made by doggedly maintaining my orientations and training as a psychologist.

From my experience, we should continue disciplinary training within the Universities in order to further intradisciplinary development and to prepare individuals to enter into newly developing technical or problem centered areas. I would see cross disciplinary programs as organizational conveniences to facilitate interdisciplinary research and funding rather than training programs.

I am not sanguine about interdisciplinary conferences. Over the years I have been subjected to innumerable well-intentioned meetings in which one or more intraorgasmic disciplines would engage in "dialogues" with their behavioral brethren. I don't recall a successful such meeting. As one of your commentators wrote, "...most of the time seemed to be spent teaching each other our introductory courses."

This is not to say that the multidisciplinary path is an easy one. As noted above, sleep research and most newly

developed areas are the "step-children" of well established disciplines. Intra-departmental and intradisciplinary reinforcements are weak or absent. Publication and funding are problematic. Your students are difficult to place.

However, to pioneer in a new area or with a new technique can be a rewarding adventure. Rather than plowing the same old field you may find yourself on new and exciting frontiers and expanded horizons of your discipline. Your new colleagues will be interesting adventures themselves. And, with luck, you will find a gold mind of funds.

> WILSE B. WEBB UNIVERSITY OF FLORIDA

Editor:

I would like to suggest that the academician/clinician Interdisciplinarity is an aspect important to the future of psychology. All too often the academic finds the clinician too foolish to converse with and the clinician finds the academic too limited to be relevant. I argue that we need each other. My academic friends keep me focused that a few clinical experiences do not a new truth make. My clinical skills at times remind my academic friends that there is more than truth to a healing relationship. As Presidentelect of the Idaho Psychological Association I have attempted to put my thinking into our April convention. We're a low budget operation, but we've talked two excellent experimentalists and a top-flight researcher of genotoxic damage from psychogenic stress into presenting for us. Academics will hear of robust research relevant to clinicians. Hopefully, clinicians will find that good research informs their practice. There is so much information out there today we need this, and other partnerships, to pursue knowledge without getting divided by our insecurities.

JACK WRIGHT

Editor:

I'm reading your article on interdisciplinarity. It is very interesting, thoughtful and well-researched. I am glad that you want to continue to do articles on this important topic. At the end, you ask what readers think. Instead of putting it all in this letter, I can refer you to a paper I wrote on the topic, if you are interested: Acitelli, L.K. (1995). Disciplines at parallel play. Journal of Social and Personal Relationships, 12: 589-596. It focuses mainly on the fact that personal relationship researchers (on the whole) consider themselves interdisciplinary when we are really multidisciplinary. I point out why this is not a trivial distinction and why we should care about it.

> LINDA ACITELLI UNIVERSITY OF HOUSTON

LETTER TO THE APS PRESIDENT Dr. Loftus:

I read your "Presidential Column" in the April 1999 *Observer* last night regarding the importance of saying thanks to those who have had a hand in shaping us and our careers. This is something I've been thinking quite a bit about as of late.

This past January, my counterpart at one of the New Mexico State campuses died rather suddenly (drug reaction following surgery for a benign brain tumor). She, like myself, was a 31-year-old psychology professor.

The suddenness, the randomness, and the realization that that could have easily been me sent me into a temporary tailspin. What have I accomplished in my life? Have I made a difference? Where have I come from and where am I going?

I emerged from the other side of this existential crisis with a few scrapes and scratches and, more importantly, a few conclusions. (I'd like to extend a special thank you to Lisa Perozynski for forcing me to take the time to reflect.)

Sparing you the details, I've decided that being a professor, specifically a psychology professor, has to be one of the best jobs I could have chosen, just in terms of having the opportunity to make a positive, lasting mark.

The work of a few researchers really struck me during both my undergrad and grad school days — work that stood out and yelled, "Everyone needs to know this!"

Even though I've never had the pleasure of working with you or even meeting you for that matter, your work (being, in my opinion, of the everyone-needs-to-knowthis variety) has had a tremendous influence on my choice of professions and how I approach my classes, and I wanted to take the time to thank you for that.

SUE FRANIZ NEW MEXICO STATE UNIVERSITY-ALAMOGORDO

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Y2K FROM PAGE 1

"The Y2K problem affects an enormous variety of hardware and software," said Taylor, whose psychology department began working on the Y2K problem over the last winter break. "In the psychology department, the main problem we had was that all 249 computers in the department contain a clock called a Real Time Clock (RTC) that is located on the motherboard inside each computer. Whenever a computer starts, the basic input/output system (BIOS) will copy that date and 'forward' it to the operating system (OS) which then transmits it to applications that request the date. Therefore, if the RTC is accurate then the BIOS, OS, and applications should have the correct date. When the year 2000 begins, uncorrected RTCs will report an incorrect date of either 01-01-1900 or 01-01-1980."

Taylor said another problem the department came up against is that since the year 2000 is a leap year, many RTCs will report an incorrect date starting on March 1, 2000.

Because PC operating systems and hardware can vary so much, the UVA psychology department had to assess each PC individually, using YMARK2000 software. "That program tests a PC's RTC ability to roll over to the year 2000, a PC's ability to have the RTC clock manually reset with the MS-DOS date command, and its ability to correctly recognize the year 2000 as a leap year," he said. Unlike PCs, Macintoshes, NeXT computers, Sparc Stations, and Silicon Graphics computers all have standardized hardware and each is produced by only one company. Therefore, the hardware and operating systems of these systems could be checked simply by going to the vendors' websites.

Aside from the general computer concerns in the psychology department, Taylor believes the most serious threat posed by Y2K to academic psychologists concerns databases. "Because the software used to work with databases will have to be changed, the databases will also need to be modified," he said. "In some cases, that won't always be possible. If databases are shared, it is essential to ensure that all systems using the databases are Y2K compliant."

Y2K at NSF

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The National Science Foundation (NSF) has been working on two Y2K related issues. On one side of the fence, NSF's information systems staff has been looking at how Y2K will affect its internal computer systems. On the other side, NSF has had to make sure that the institutions and labs to whom they give grant support are also preparing for Y2K.

"NSF has addressed Y2K in the same manner other federal agencies and most other private industries have," said George Strawn, acting executive officer for the Computer and Information Science and Engineering Directorate. "NSF has been doing every-thing they can to test and scrub out their own information technology systems to do everything possible to assure that they will work on January 1, 2000." As a result of NSF's efforts, the federal government has given NSF high marks among federal agencies for Y2K preparedness.

According to Steven Breckler, program director for social psychology at NSF, there is little concern about Y2K related harm or danger among the program staff at NSF. "I think we are all quite confident that our internal computer systems have been checked out and will be fully operational," he told the Observer.

As for NSF grantees, NSF issued advisories to all of its supported investigators and institutions about Y2K. On June 27, 1997, NSF issued Important Notice (IN) No. 120 "Year 2000 Computer Problem" to presidents of universities and colleges and heads of other NSF grantee organizations to remind NSF awardees of their responsibilities under NSF grants and cooperative agreements. Two significant points in IN 120 were:

- The Y2K problem is included in the recipient's already stated responsibility to maintain the scientific, administrative, and financial infrastructure of the activity being supported. The Y2K compliance requirement applies to the grantees subrecipients, which is covered by both the NSF Grant General Conditions (GC-1) and the Federal Demonstration Partnership NSF-Agency Specific Requirements.
- NSF should be notified if a recipient concludes that the Y2K problem is likely to have a significant impact on its ability to carry out a funded activity. Funding for Y2K compliance needs will be approached on a case-by-case basis.

(The full text of this letter can be found at http://www.nsf.gov/pubs/ 1998/nsf98y2k/nsf98y2k.htm)

"I have heard absolutely no concerns voiced by investigators who are supported by the social psychology program," said Breckler. He added that he would be surprised if many concerns or anticipated problems will be connected with research in the social and behavioral sciences. Breckler thinks if problems exist, they will be in connection with fields of science that depend on much larger and more complex computer systems.

"The bottom line is that I sense very little concern in the social and behavioral sciences, both on the NSF side and on the part of investigators supported by us," said Breckler. "I am quite confident that NSF is dealing quite well with the Y2K problem."

NSF and the General Public

Last December, NSF commissioned a Gallop Poll to investigate the general public's preparedness, opinions and concerns about Y2K. Nearly half of the 1,032 adults surveyed said they would avoid traveling on airplanes on or around January 1, 2000, and nearly two-thirds said they would seek extra confirmation of bank accounts, retirement funds, or other financial records.

NSF's Strawn was surprised with the Poll's results.

"Since I have worked with information technology for my whole career, I didn't expect the public would have the same attitude about something that I have," he said. "I found myself to be an average American in terms of my opinions and the opinions expressed in the poll."

Key findings of the NSF poll showed more than two-thirds of those polled believe Y2K computer problems will last from several weeks to several months, and possibly as long as a year; 46 percent of those polled predict some air traffic control systems will fail, putting air travel in jeopardy; nearly two-thirds of respondents polled in December thought banking and accounting systems would fail, possibly causing errors in employee paychecks, government payments, or other automated financial transactions; and over

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half of the respondents say they believe their employers are taking sufficient steps to correct any problems they might face because of Y2K problems. Just under one-third of those polled say they are not sure their employers are taking sufficient steps to correct workplace Y2K problems.

Y2K at NIH

The National Institutes of Health (NIH) began its Y2K preparations in June 1996, when management convened a Y2K working group. The focus of the Y2K working group was to provide leadership and direction for its initiative to ready computers and software. The working group, supported by and made up of representatives from NIH institutes and centers, is led by the Center for Information Technology. Its decisions are implemented NIH-wide.

A member of the Y2K working group is Y2K Coordinator Cheryl Seaman who is pleased with the headway NIH has made.

"All of the NIH mission critical systems are compliant and tested and only a few non-mission critical systems still require remediation," said Seaman. "We are in very good shape here. We are still waiting on a few things—for example manufacturer software upgrades—but we have done everything we can for the time being. The agency is in excellent condition."

NIH's website contains valuable information on Y2K, including two clearinghouses where users can browse for compliance information on computer hardware, software and biomedical equipment specific to their own research and administrative missions.

"Our biomedical clearinghouse (located at http:// irm.cit.nih.gov/y2000/) includes equipment that is used by the NIH community as well as compliance information obtained by other federal agencies," said Seaman. "The biomedical clearinghouse has a search capability so our scientists and the public can determine the compliance of a piece of equipment by logging onto the website and searching the clearinghouse by product, manufacturer, or compliance code. We have tried to include as much information as possible in there."

The biomedical clearinghouse also posts step-by-step guidance for investigators on how to identify equipment concerns, target and inventory equipment, obtain Y2K compliance information, approach remediation, and determine if contingency measures should be in place.

NIH is also engaged in business continuity and contingency planning, for example, thinking about back-up measures for equipment like freezers and incubators, should the power go out. "The Y2K issue for many pieces of scientific equipment is a display feature. You have to decide the significance of the non-compliance; is it an annoyance or something that could pose a risk to patient or animal safety?" said Seaman. "This judgment determines the remediation strategy. Personal computers and the software that operate other equipment represent the largest concern in the laboratory setting. We basically rely on manufactures to tell us if something is compliant or not. However, because companies change their opinion, Y2K can be a constant challenge."

Seaman mentioned some points researchers should ponder. "Do you plan on having your equipment running during that period of time? Have you made plans to back-up your data prior to the



rollover? All of our principal investigators are certifying their equipment. And in doing that, it at least brings this issue in front of their eyes. It personalizes it for them and keeps them abreast of Y2K issues for their equipment and research," she said.

What about NIH Grantees?

Are NIH grantees showing concern over Y2K? According to Seaman, they have not been too vocal at this point. "I have talked to our office of extramural research and they said they have received only a handful of inquiries from the grantees. Last year, we sent notification out via the web-based NIH Guide for Grants and Policy reminding grantees about their Y2K responsibilities. We are beginning to see more institutions asking the agency 'what is your state of Y2K readiness?' In fact, we are putting together a response to put up on our web site. I think people are paying closer attention to Y2K issues now, especially because they hear of it outside their work environment. The media is talking a lot more about it. Y2K is an issue that is gaining more of the public's attention. People are concerned, but they aren't quite sure how concerned to be."

Y2K at the University of Toledo

The University of Toledo began its Y2K preparations in early 1997, when they assembled a Y2K project team—a team that consisted of both desktop and mainframe people. "The goal of the Y2K project team was to find as many Y2K problems as we could and solve them as we go," said Wendy S. Miller, the university's main desktop specialist. Miller, who recently received her PhD in psychology from the University of Toledo, is a software specialist for the university.

Part of Miller's duties included doing a survey of all the desktop computers on campus, then fixing the hardware on these desktops. In some cases, this resulted in a lot of these computers being replaced. The Y2K project team also did a lot of research on Y2K compliant software. "We are working with our clients to make sure that they get all of their data converted from old to new software packages," said Miller.

According to Miller, one of the toughest challenges of the Y2K preparations has dealt with software. "It's been difficult to find Y2K compliant software that meets each department's individual needs," she told the *Observer*. Miller added that most of the software issues on the University of Toledo campus are now under control.

So, Head for the Hills, or Just Be Prepared?

Before you get that suitcase out of the attic and start to stockpile water and canned goods, you might be interested in what those interviewed will be doing as the clock counts down the last minutes of 1999.

"I am going to try to be prepared without going crazy about it," said Miller. "I plan to have some extra food, water, and cash on hand, as well as candles and kerosene in case the electricity goes out. But some people are moving to the hills and arming themselves. I think that's a bit of an overreaction."

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Obituaries

Mary D. Salter Ainsworth 1913 - 1999 Attachment Theorist

Mary Ainsworth, the undisputed "mother" of attachment theory, died in Charlottesville, Virginia, on Sunday March 21 after a series of increasingly debilitating strokes. Ainsworth, who had served as Commonwealth Professor and Professor Emirata of Psychology at the University of Virginia since moving to Charlottesville in 1974, continued to contribute to



and participate in debates regarding attachment theory until 1992. Born in Glendale, Ohio, on December 1, 1913, Ainsworth was 85 at the time of her death.

Even more remarkable than her longevity, however, was the continuity and coherence of Ainsworth's professional focus. Consider, for example, that the woman whose name was almost synonymous at the time of her death with the concept of "attachment security" wrote her doctoral dissertation on "The concept of security as a basis for the evaluation of adjustment" exactly 60 years earlier! Indeed, Ainsworth always credited her mentor at the University of Toronto, William Blatz, with introducing the concept of security when she was an undergraduate student, even though Blatz's own 'reflections' on Human Security was not published until 1966, two years after his death. It was Blatz, Ainsworth later explained to me, who shaped her lifelong focus on the origins and manifestations of attachment security in infancy. Indeed, Blatz was the first psychologist to suggest that infants used their parents as secure bases from which to explore their environments-a concept that later became central to Ainsworth's ground-breaking interpretation of individual differences in attachment security. Of course, Ainsworth herself developed and articulated the broad theoretical framework within which the concept of security is now understood.

After teaching at the University of Toronto for three years immediately after completing her doctorate, Ainsworth was commissioned in the Canadian Armed Services. She returned to the University of Toronto in 1946, serving as an assistant professor of psychology until 1950, when she married Leonard Ainsworth, a demobilized soldier than completing his Master's thesis (on insecurity) under the direction of William Blatz. Fortuitously, her new husband wanted to continue his studies in England and the resultant move to London afforded Ainsworth the opportunity to meet and work with John Bowlby, a British psychiatrist with whose name hers was thereafter inextricably linked. Having focused his writings in the 1940s on the etiology of juvenile delinquency and sociopathy, Bowlby had recently finished a monograph for the

World Health Organization on the devastating effects of maternal deprivation. The Second World War had left uncounted children as orphans and maternal deprivation was widely viewed as a condition destined to stunt their psychosocial growth. Energized by these concerns, a loose but distinguished group of mental health professionals who shared Bowlby's belief in the importance of motherchild relationships began meeting regularly at the Tavistock Clinic. Alongside such influential figures as James and Joyce Robertson, Rudolph Schaffer, and Anthony Ambrose, therefore, Ainsworth and Bowlby began their lifelong efforts to understand the formative role of mother-infant relationships and to develop preventive and therapeutic interventions for those whose experiences had placed them at risk. Children appeared to be devastated by extended social deprivation even when their biological needs (for food, warmth, etc.) were satisfied and Schaffer showed that they appeared especially vulnerable when separated late in infancy. Auspiciously timed experimental research by Harry Harlow suggested that infant monkeys had a biological need for mother love, and the nascent attachment theorists were quick to see that this might be true of humans too.

Unfortunately, little was known at the time about the early experiences of young children living with their parents; most of the available data were obtained through reconstructive clinical interpretation rather than by observing children directly. Regrettably, no one had available the time or resources needed to undertake a normative observational study.

Once again, it was a career move for her husband—this time to East Africa—that afforded Mary Ainsworth an opportunity that was to shape both her career and the field she was destined to lead. And what an opportunity it was! Not only could Ainsworth devote her attention to the observational study of which she had dreamed, but she was able to observe mothers and infants in a less industrialized culture where, she hoped, intrinsic human tendencies might be more obvious than in a context where industrialization disguised, obscured, or concealed the phenomena she wanted to understand.

During the nine months that the Ainsworths spent in Kampala, Uganda, she conducted the first intensive study in which the data were derived primarily by observation and only secondarily by interviewing parent informants. Inspired by the focus on motherchild separation that characterized discussions at the Tavistock Clinic, Ainsworth initially sought to study reactions to the separations that reportedly accompanied weaning among the Ganda. She quickly learned that these separations were more ephemeral than real, however, and so focused on the infant-mother relationships more broadly instead. Ainsworth paid special attention to brief everyday separations, however, reasoning that these might well provide insight into the children's burgeoning social relationships.

Ainsworth proved to be an insightful observer, and her experiences in Uganda convinced her that individual differences among infants were remarkably large, that these differences reflected

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William Kessen 1925-1999 Pioneer in Infant Development

With William Kessen's untimely death from a stroke on February 13, 1999, we have lost a scholar of uncommon depth who brought a remarkable perceptivity and creative insight to the study of early infant development and sensory perception. In the 1950s and 1960s, Bill Kessen initiated a new era in studies of infant cognitive development. His labora-



tories for the study of infants, established at the Yale School of Medicine and then in the Yale Department of Psychology, introduced experimental methods and state of the art measurement techniques to a field that was up to that time largely based on naturalistic observations. His work demonstrated how active and engaged infants were from the first hours in exploring their world and how even the most basic patterns of visual activity were geared toward infants' actively perceiving, processing, and making sense of their world long before verbal speech gave evidence to formal thought. From studies of how infants perceive shape and direction to studies of color perception and motion, Bill's contributions laid the intellectual groundwork for the contemporary emphasis on the importance of early experience in the development of the brain and the relations between brain and behavior in young children. Bill's energy and passion for empirical work attracted some of the brightest and most creative graduate students who have since become leaders in the field around the world. In the best tradition of academic genes, Bill's students have themselves paired careful science with generous mentoring; and the studies of infant cognitive development begun in Bill's laboratories have flourished in many departments of psychology and developmental science across the country and the world.

In 1991, Bill's students, colleagues, and friends published a festschrift for him (Kessel, Bornstein, & Sameroff, 1991). Their tributes and memories and Bill's recounting his own story provide a historical backdrop for our pausing now to look back upon, honor, and celebrate Bill's place in our lives. Bill was born in Key West on January 18, 1925. An only child, he spent his growing up years in this deep southern, coastal world where "family connections were central and the extended connections recounted often (p.285)." His father was an engineer who worked for the Peninsular and Occidental Steamship Company, and his mother "in the mores of the time and the place, was exclusively wife and mother. (ibid). With the hurricane of 1935, Bill's family moved to Miami and then to Fort Lauderdale. A child of the depression, he was a quick student, and school was a haven of sorts, albeit colored by a serious myopia corrected with glasses when he was 10 and by his own admission, an enduring unathletic bent.

Despite his being an applauded student, Bill's attending college did not become a possibility until his senior year in high school. He entered the University of Florida in September of 1941 when it was still a men's college. He acted and worked as an announcer in the university radio station, a job he claimed rid him of his southern accent though to a native ear he retained the faintest tint even late in his life. With his 18th birthday, he entered the ranks of millions of young men called into the service and into the second World War. He was stationed at the Tenth Replacement Depot in Midlands, England where he was a clerk until after the end of the war in Europe. By his own report, in his unit were two published poets, students of Bach and Picasso, a doctoral psychologist and an accountant, and the collective disruption of their individual lives brought them together in a wartime study group. In his characteristically humble style, he said they fed him. But it was probably mutual if his enthusiasm and generosity as a teacher had any precursors. Without knowing the other members of the group, we can only imagine his quick humor and playful synthetic mind bringing a certain spirit to a band of displaced scholars and professionals whiling away long hours between shifts and assignments. Accepting the night shift, Bill read his way through the war and through the Army's library. Amidst the Army routine dutifully processing the drab duplicate and triplicate orders supplying battalions on the European front, Bill created his own independent study (and learned to type at a wickedly fast speed). Serving 34 months as private first class, he described himself as an unlikely, even "lousy" soldier (p. 287), but in the best of an adaptive psychologist, he turned the Army into a very long and productive reading period.

After the war, Bill returned to the University of Florida, but like so many who were fortunate enough to survive the war and come home to a grateful and confident nation, the freedom offered by the GI Bill brought a radical change to Bill's life. He became in his words, a "new academician" (ibid) and broke the bounds of region and expectation-he would make a profession of scholarship. He also made a fateful decision to become a psychologist rather than a historian though as is often true of such crossroads, many years later he found his way back to history. Perhaps most fateful of all, he came north to Brown University for his masters and joined a small department of experimental psychologists focused on aspects of perception and learning. Bill customarily would interrupt his story at this point to say that his life in the late 1940s changed in many other ways besides a new found academic freedom, becoming a psychologist, or even leaving the deep south for the cultured restraint of New England. He met Marion Lord in 1948, they were married in 1950, and in that same year, they made their way down the coast to New Haven, Connecticut. Of those years, Bill wrote "It was a halcyon time in our lives; the secrets of experimental psychology were heady enough for my unevenly trained mind but the excitement of meeting and falling in love with Marion rose above all the other excitements (ibid)."

Halcyon days indeed. Friendships lasting a lifetime flourished in those early days in New Haven. Children were born, books took shape, laboratories expanded, his voice as a serious empirical scientist, methodologist, and philosopher of psychology grew louder and clearer. He met George Mandler who introduced him to the blend of serious scholarship addressing issues of immediate clinical and social concern. Their friendship deepened around their

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differences in the infants' interactions with their mothers, and that focus on infant reactions to brief separations was indeed informative. Although her book on the Ganda was not published until 1967, many of Ainsworth's central conclusions were shared with Bowlby and her other London colleagues much earlier. Their unsurprising convergence with emergent "attachment theory" strengthened Ainsworth's and Bowlby's confidence in the integrative theory that Bowlby first articulated in an extended essay published in 1958. In light of Ainsworth's later work on patterns of attachment, incidentally, it is interesting to note that Ainsworth classified the Ugandan infants as securely-attached, insecurely-attached, and non-attached largely on the basis of secure base behavior and variations in the amount of crying observed.

Leonard Ainsworth's career brought Mary Ainsworth back to North America in 1955, where she established a clinical practice in Baltimore and obtained a position in the psychology department at Johns Hopkins University. Within a few years, Ainsworth and her husband divorced, however, and she began devoting most of her energies to the longitudinal observational study that was to dominate her life for decades. With the assistance of a remarkably perceptive observer, Barbara Wittig, Ainsworth began visiting 16 middle class infants and their mothers at home shortly after the infants' births in 1962—the year before being awarded a full professorship at Johns Hopkins. With visits of two to four hours every two to three weeks, Ainsworth compiled copiously detailed notes of these infants' earliest experiences (and those of another 10 infants observed by two students in 1966-67) that were to keep students such as myself productively occupied for years thereafter.

As the infants' first birthdays approached, Ainsworth decided that she needed to observe each of the infants in a standardized setting in order to elucidate the differences among them. Because her work in London and Uganda had identified the centrality of reactions to separation, the standardized procedure that Ainsworth developed with Wittig involved observations of infants' responses to two separations from their mothers in a "Strange Situation." As in the home observations, the raw data comprised detailed narrative descriptions - videotapes were not yet ubiquitous in developmental research. The first analyses of these narratives focused on variations in the levels of distress brought about by the unfamiliar room, the encounter with a stranger, and the two brief separations from mother. Ainsworth was dissatisfied with the insights these analyses afforded, however, because they failed to capture variations in the infants' use of their mothers as secure bases. Reexamining the observed behavior from a perspective which emphasized secure base behavior and differential reactions to reunion, Ainsworth (along with Sylvia Bell) developed the categorical classification system that effectively revolutionized research on infant socioemotional development. Indeed, by introducing the "Strange Situation" and the categorical coding procedure associated with it, Ainsworth provided attachment theory with the crucial organizing techniques and interpretive concepts that were to shape the systematic study of early social development for nearly three decades.

For Ainsworth, the 1960s were characterized by unprecedented professional excitement and success. The Kennedy and Johnson Administrations had placed great emphasis on the importance of early experiences, and the resources available to researchers including those who studied child development—increased dramatically. Bowlby's synthesis of control system theory, behavioral biology, developmental psychology, and object relations theory attracted enormous attention, particularly with the publication of *Attachment* in 1969, and Ainsworth was obviously the developmentalist who had most extensively shaped the theory. During a sabbatical year (1966-1967) spent at Stanford University's Center for Advanced Study in the Behavioral Sciences, Ainsworth completed her own synthesis of the literature on infant-mother relationships, a masterful paper (published in *Child Development* in 1969) that sought to demonstrate the empirical and conceptual superiority of attachment theory relative to the psychoanalytic and learning theories that were then more popular.

Spurred by the publication of Bowlby's Attachment, Ainsworth's Infancy in Uganda (1967) and her meticulous review of attachment theory (1969), talented students began seeking the opportunity to work with Ainsworth at Johns Hopkins. Robert Marvin, Barbara Wittig, and Sylvia Bell were followed by Mary Blehar, Inge Bretherton, Alicia Lieberman, Mary Main, Everett Waters, and Robert Woodson—most of whom went on to make noteworthy scholarly contributions of their own. Thus Ainsworth's last years at Johns Hopkins, including the ones I was fortunate enough to share, were marked by extraordinary intellectual excitement as her students coded and analyzed the observational transcripts and began publishing, with Ainsworth, the empirical papers that constituted some of her most enduring contributions to attachment theory.

Building on Bowlby's account of normative developmental processes, Ainsworth's meticulous observations led her to conclude that individual differences in the quality of infant-mother attachments could be elucidated and characterized though observations of the infants' behavior, particularly when reunited with their mothers. She further concluded that the individual differences apparent in the Strange Situation were largely a product of contrasting experiences in the preceding months of the infants' lives. Infants whose mothers responded sensitively later behaved securely, she argued, whereas those whose mothers were insensitive and unresponsive behaved insecurely in the Strange Situation. Remarkably, since these conclusions were initially derived from exactingly close study of only 23 infants, subsequent research has largely confirmed Ainsworth's conclusions, although some controversy remains regarding the proportion of the variance in attachment security that can be explained by variations in prior maternal sensitivity. Ainworth's conceptualization of the ways in which infants were shaped by their earliest social experiences became an integral part of attachment theory, a central component of basic texts on early development, and a core belief of professionals and laypeople alike. Indeed, few other developmental psychologists-Jean Piaget comes to mind as another-live to see their portrayal of developmental processes so thoroughly integrated both into popular and professional knowledge of child development.

Ainsworth's work on the Baltimore Longitudinal Study was capped by publication of *Patterns of Attachment* in 1978, four years after Jim Deese enticed her to follow him from Johns Hopkins to the University of Virginia. In the two decades that followed, Ainsworth

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remained the foremost authority on attachment theory within developmental psychology. In addition to her integrative role—she was a compulsively and exhaustively careful reader of relevant papers—Ainsworth continued to advise and guide present and former students, encouraging many to extend attachment theory beyond its focus on early infant-mother attachment. Thus Mary Main developed and popularized a tool for exploring adult reconstructions of early relationships and Virginia students Roger Kobak and Jude Cassidy pioneered the study of adolescent attachments and the effects of abuse on attachment, respectively.

Awareness of Ainsworth's enduring intellectual contributions to developmental psychology led to formal professional recognition of her achievements in the 1980s. For example, Ainsworth was given an Award for Distinguished Contributions to Child Development Research (1980) by the Society for Research in Child Development, of which she had been elected President (1977-1979). She received the G. Stanley Hall Award (1984) and the Distinguished Scientific Contribution Award (1989) from the American Psychological Association, the Gold Medal Award for her Life Achievement in the Science of Psychology in 1998, and was made an honorary Fellow of the Royal College of Psychiatrists in 1989.

Fortunately, professional acclaim did not spoil Mary Ainworth's essential decency and humility any more than earlier professional slights (particularly in the years prior to attachment theory's acceptance) had weakened her enthusiasm and resolve. She encouraged my youthful enthusiasm for attachment theory, for example, offered me the stipend I needed in order to continue my studies, and did not hesitate to welcome me into her home (and laboratory) when I arrived unexpectedly early in the United States. Insightful, complicated and (at least in my case) naive questions always elicited copiously detailed and meticulously typed responses, many of which I continue to treasure. When challenged by those who shared her basic beliefs or by those who questioned their validity, Ainsworth responded constructively, avoiding the temptation to hurl *ad hominem* reproofs. Long after it became politically incorrect, furthermore, she chain-smoked out of habit and in a vain effort to control the anxiety that always attended her public lectures and appearances.

Ainsworth's death was not unexpected, but it was nonetheless untimely. It deprived attachment theory in particular, and developmental psychology more generally, of a commanding presence who indelibly shaped the discipline's emergence throughout the last half of the 20th century. At a time when students learn to focus their literature reviews on just-published articles and describe reports published in the early 1990s as "early" or "older" studies, Ainworth's carefully reasoned articles and books from the 1970s remain classics that inform and inspire those who read them. Attachment theory will continue to develop and change in the years ahead, but Ainsworth's role in the genesis of this theory, and of the ethological approach more generally, will never be equaled. She was, truly, one of a kind.

Michael E. Lamb

NATIONAL INSTITUTE OF CHILD HEALTH AND HUMAN DEVELOPMENT

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your campus for your web page, many campuses have style guides of their own to which they will want you to adhere^{6, 7}.

Once you have determined how you plan to present yourself to the world, what do you have to say? If you decide to include a picture of yourself, make sure to choose one that reflects the image you wish to project. Additionally, decide on several categories of information to be offshoots of your main page⁸. These can lead to other pages you maintain or to outside web pages. Try not to make your main page too busy or too long.

You will need a place to store your web pages. Some campuses have free web space, some Internet providers will include space with Internet service, and some companies offer free home pages on the Internet⁹.

At this point, you should have a reasonable idea of how you want to organize your professional page and its content. You should be thinking of types of backgrounds^{10, 11}, banners, and icons¹² you want to use. Remember to use your Gestalt principles of good form and that neon is out.

A web page is just a document that can be read on many different types of computers. The link, or URL, is just the directory path and file name that tells the user's computer where to find the document. Web pages are written in a simple language called HTML¹³ that can be edited as text using a word processor. Some word processors can convert a document into a HTML file, while other programs such as Adobe Pagemill are specialized to design web pages and are very similar to word processors.

If you are going to include pictures you need to have access to

a scanner so you can convert a photograph into a digitized image. Digitized images should be kept to a minimum size. The larger the image, the longer it will take to download and the viewer may become impatient and move on to another site or section of your web page.

While viewing other people's home pages, notice that some have animation, music, fancy graphics, bells and whistles. Remember that you are developing a professional web page. Consider how having the theme song for 'Rocky' playing as the viewer is waiting to down load a full size picture of you on your trip to Yosemite, while all the viewer can see clearly is the web counter that indicates only thirteen people have visited your site since this time last year and an icon that apologizes that the site is still under construction. The best way to impress the viewer is with who you are and what you have done. Keep it simple. Keep it professional. And keep it up to date. Which reminds me, I have some updating of my own to do. \blacklozenge

References

- 1) http://psych.hanover.edu/APS/APSSC/reprints.html
- 2) http://equinox.comnet.unr.edu/homepage/
- 3) http://info.med.yale.edu/caim/manual/
- 4) http://webdesign.tqn.com/msubstyle.htm
- 5) http://www.isd.fsu.edu/jclark/design.html
- 6) http://www.lehigh.edu/~inwww/styleguide/required.html
- 7) http://www.unr.edu/stylegui.html
- 8) http://unr.edu/homepage/kimbeal/
- 9) http://www.netcolony.com/
- 10) http://www.sfsu.edu/~jtolson/textures/textures.htm
- 11) http://cpcug.org/user/jlacombe/backgrnds/johnback.html
- 12) http://www.iconbazaar.com/
- 13) http://blair.library.rhodes.edu/Default1htmls/web.htm





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first book Language in Psychology (1959) and became a lifelong collaboration bridging Cambridge and New Haven and then east and west coasts. His family began to grow with the birth of their first daughter Judith and then Deborah (joined four and 10 years later by Anne and then by Peter, Andrew, and John). He joined the Yale Child Study Center as a postdoctoral fellow in 1952-the same year the University granted him a PhD for his study of Hull's stimulus-intensity relationship. Rigorously trained as an investigator in animal learning, he was at the center of the hot developmental field of the day-understanding the basic mechanisms of learning and cognition. The clean lines of the experiment, the simplicity of discretely defined behaviors and responses, rigorous methods, the pleasure of well-formed data-these were the alluring beacons and constants even as he broadened and deepened his interests. He sometimes called his early days as an animal psychologist a detour and noted that particular phase of his career was short-lived. Shortlived or essential catalyst for the next phases of his academic development-who's to say.

But Bill's nature was to glean from all experiences around him, and in his early years at Yale and at the Child Study Center, he met sensitive child clinicians observing infants and meticulously documenting the nuances of behavior and emotion. Prominent in the 1950s was his friendship with Kathe Wolf whom he always credited with teaching him the subtleties of Freud and Piaget and introducing him to a psychologist with a tonality and palette different from, though harmonious with, the experimental laboratory. She was a remarkable observer of children and found the same talent in Bill. By his light, Kathe blended empirical science and a tolerance for ambiguity, uncertainty, and even for the failure of science to reveal a certain truth. It was a lesson that came naturally to Bill but one he never forgot, always credited to Kathe, and resolutely conveyed to his students.

His experience with Kathe and others in the psychology department and the Child Study Center brought him out of the animal experimental laboratory to work with children-at the least they encouraged what was already capturing his own attention and energy. In his first 10 years of research at Yale he focused on newborn movement and sucking. His studies were accomplished in a small room on the postpartum obstetrical service of Yale-New Haven Hospital-elegant experimental studies with newborns conducted within the unpredictable climate of a clinical service. Through his ever-present ability to synthesize and integrate, Bill blended the empirical and clinical worlds of infant study. Between 1965 and 1980, he turned his attention to how infants explore and store perceptual information about their world, studies that continue three and four generations later with considerable energy and creativity in laboratories scattered around the world. As much as he focused on the 'cold' theories of cognitive development, he integrated these with the 'hot' theories of emotion and socialization. For example, in 1961, he and Mandler published in Psychological Review a paper on "Anxiety, Pain, and the Inhibition of Distress" in infancy, and in that same year, he published "The look of distress" in Contemporary Psychology. In his work, he showed that the rigorous science and measurement of cognitive and perceptual processes found their meaning in the understanding of children

as full people—the blending of the cognitive and emotional worlds, the hot and cold theories of development, rigorous observation with service and clinical responsibility.

Bill's academic career took solid root at Yale and he never left. He joined the psychology faculty as an assistant professor in 1954 after his two-year postdoctoral position at the Child Study Center. He was named full professor in 1965 in both psychology and pediatrics and in 1976 was named the Eugene Higgins Professor of Psychology. Along the way was a year (in 1959) at the Center for Advanced Study in the Behavioral Sciences in Palo Alto with his friend George Mandler and a Guggenheim fellowship in 1970 that he and his family spent in Florence. A second year in Italy in 1976 solidified a relationship with a culture and place he came to call his "other country" (p. 283). Always a steadfast and loyal citizen of Yale, Bill served as Chairman of the Department of Psychology and Secretary of Yale University in 1980. His laboratories were active for over three decades after he joined Yale in 1952, and even after he stopped his own empirical studies, he made his laboratory space and equipment available to many students just starting their research careers. He urged his students always to stay close to their data and to the hands-on experience of seeing children, talking with families, learning to observe. Or as he enjoined, "Take chances in your thinking but never in your procedure (p. 290)."

Bill's understanding of children as full people, or as he phrased it, the construction of the child, took him to many parts of the world as an ambassador and scholar of child development across cultures including Russia, Poland, Italy, and Czechoslovakia. In the early 1970s he led one of the first delegations to China after the United States established diplomatic relations with Beijing, a trip that culminated in his book *Childhood in China*. He always sought to place his empirical tradition in a broader theoretical and historical context and in the latter part of his career, Bill returned to his early interest in history.

Reflecting on his original decision to leave history for psychology, Bill felt that the significant issues facing the world were more amenable to psychological rather than historical approaches. After all, he made his decision in the middle of the second of this century's caliginous confusions of human intention and spirit. History offered no comfort to the chaos. But his was such a graceful and broad seeing mind that it seems inevitable in retrospect that he would be drawn back to history if only to puzzle over those accounts of human behavior left so often unexplained, the unavoidable ambiguities of human existence. Beginning in the 1980s he turned his attention to the emergence of psychology in the late 19th and early 20th century. Here as with his empirical work, his scholarship was exemplary and reflected his exceptional erudite breadth that bridged classical philosophy, the history of science, developmental theory, and empirical traditions. His theoretical contributions in this area are reflected in such works as The Rise and Fall of Development and a study on the traditions of infant care in this country that he was completing at the time of his death. As he commented too, his journey from animal learning studies to the Rise and Fall of Development reflected not a single minded line of empirical truth hunting but instead a deepening conviction about and respect for the scatter, ambiguity, even chance under the

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manifest order of all developmental processes.

In Bill's death, we have also lost a gifted teacher who found the deepest pleasure in his students' discoveries and successes. It is often rare for such talents in research and scholarship to be equaled if not exceeded by talents as a teacher. His teaching contributions were recognized before his death by the Distinguished Contributions to Education in Child Development Award from the Society for Research in Child Development (recently accepted posthumously by Marion). But deserved as such a recognition is, it cannot tell the full story of his teaching gifts. Bill's devotion to teaching was perhaps exceeded only by his devotion to his family, and he brought all of himself to both. When more than the maximum enrollment of students wanted to attend a popular seminar, he simply taught it twice in the same year rather than turn anyone away or compromise the experience with too large a group. His ability to engage his students as companions in scholarship meant that undergraduates and graduate students alike remained his col-He modeled in his leagues throughout his and their careers. teaching the essence of the academic mission-how to ask questions, the value of the considered critique, how to balance healthy skepticism with excited wonder, and the necessity of clarifying and refining ideas by writing-over and over, draft after draft. While all of us stood in awe of his remarkable ability to craft an idea in words, he was never fully satisfied and always writing and rewriting. He feared for himself (and for his students) the treacherous Scylla and Charybdis of the academic condition "Terminal Pomposity and Skeptical Silence (p. 285)." But at the same time he taught us genuine respect for the work and the art of academic discourse and for the necessity of forging our ideas in the crucible of the written word. He was an elegant craftsman with words, dazzling as a speaker, always generous and kind as teacher and friend, and at his roots, self-effacing and humble.

About Bill's friendship, a special word need be said about his ability to engage without judgement and to respect and encourage without the confines of expectation. Bill had the remarkable gift of accepting his friends as they came and walking alongside them

wherever they wanted to go. His gift as teacher and friend was his willingness to engage in an exploration with no preset grand plan or goal but simply a promise to stay the course, rejoice in the moment, and take pleasure in the unexpected. His unerring ability to spot irony and temper pessimism with humor made him a playfully wise counsel even as he protested that he too was still growing up. And any story about Bill told in whatever fashion cannot end without pointing to the wellspring and anchor of his life-Marion and his children. Family was as central to him as his life in the academy. He orbited faithfully around both. But it was Marion and his children who stabilized the perigee and apogee of his scholarly world and it was their generosity of spirit that has made all of our collaborations and friendships with Bill that much richer.

In his work and life, Bill showed how the study of children's development can be an inspiration and a serious endeavor blending science and service, science and history, science and philosophy. The model he taught and exemplified for a scholar's maturation and development represents the ways in which science can be a way of life and a philosophy as much as a profession. In speaking of 40 years at Yale, Bill wrote: "There are three crosscutting melodies in my song-the life in my family, the curious life of the university, and the life that you have all been a part of, that exploration of empirical and (increasingly) conceptual mysteries that brought us together (pp. 287-288)." To have been a fellow traveler with Bill in these explorations and to continue these travels with him now through his presence in his family, colleagues, and students is to be granted a gracious and rare opportunity. We miss him greatly but are forever grateful that he was among us and that we can celebrate the gifts of his scholarship, teaching, and friendship.

> LINDA C. MAYES YALE CHILD STUDY CENTER

Kessel, F.S., Bornstein, M.H., & Sameroff, A.J. (1991). Contemporary constructions of the child: Essays in honor of William Kessen. Hillsdale, New Jersey: Lawrence Erlbaum Associates.

OPINION FROM PAGE 5

First, it might be argued that in a mature science, specialization becomes inevitable. We want to make it clear that we are not opposed to specialization and that we believe specialized research has played and will continue to play an important role in psychological science. Our argument is not against specialization, but in favor of a variety of research styles, including the broadly focused and wide-ranging style of the dilettante.

Second, it might be argued that dilettantism can be accommodated at later points of a scientific career, but not at earlier points when a scientific investigator is just starting out. At the starting point, the argument would go, an investigator needs to establish a reputation in a specific line of endeavor. We agree that investigators who are early in their career, and probably later in career as well, will wish to have a main line of endeavor, but the arguments in favor of dilettantism apply at any point of their career and, arguably, most forcefully, early in a career, when an investigator needs to find a research area or a paradigm in which to make a

splash.

Third, it might be argued that the current system of professional education and socialization, focusing as it does on the doctoral dissertation, inevitably leads young investigators to be narrowly focused. We believe this argument to be incorrect, however. Many graduate programs require a proseminar, core courses, or a broadly based qualifying exam to ensure breadth in graduate students' education. Narrow specialization is at no point a necessary concomitant of the professional educational system.

Conclusion

For whatever reason, many professionals in positions of power in psychology seem to have decided that a relatively narrow focus is good and that dilettantism is bad. They are right-if they are concerned about work that is uninformed, superficial, or mindless. But the work of good dilettantes is none of these, and the work of perhaps the greatest dilettante of all time, Leonardo da Vinci, was very much the opposite.

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NSF FROM PAGE 6

"critical mass of funding" is also necessary.

"Additional resources are needed if the two new divisions are to sustain the momentum that led to the reorganization," said Kraut. The FY 2000 budget request from NSF proposed a 5.3 percent increase for NSF's behavioral and social sciences research programs, which would bring them to approximately \$106 million. Kraut asked the House panel to support "a significant increase in the NSF budget for behavioral and social science research programs" beyond the President's request.

Last year, in their explanatory reports on the NSF budget, both the House Appropriations Committee and its Senate counterpart expressed support for the reorganization and for basic behavioral and social science research at NSF more generally.

In its capacity as a member of the Coalition for National Science Funding, APS also asked the lawmakers to increase the NSF budget by 15 percent in FY 2000, as recommended by the Coalition. This would bring NSF to a total of \$4.3 billion.

Noting that Congress provided a substantial increase for NSF in FY 99, Kraut said the additional funding "has made a difference throughout the agency and particularly in the programs that I know best, those that support psychological science."

"It is our position that this general growth needs to continue at NSF in FY 2000," he said, adding that President's request of a 5.8 percent increase is targeted heavily toward information technology, and that anything above that amount should be used to increase other areas at NSF.

Kraut also expressed concern about the apparent underfunding of behavioral and social science grants compared to grants in other areas at NSF. The average length of an award in behavioral and social sciences is only two years, compared with the NSF-wide average of 2.7 years. Further, the average grant in these areas receives \$20,000 less than the average NSF-wide grant.

"These disparities exacerbate the underfunding that NSF's behavioral and social science research experiences, both in

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doing the same? ♦

Once a decision is made to celebrate narrowness of focus and possibly of vision, the decision-makers in positions of power will tend to choose people who will meet their arguably artificial standard, and these people in turn will choose others like themselves. The field ends up with a closed system that perpetuates itself (Sternberg, 1997b). Eventually, the field risks the loss of what arguably has been the cardinal attribute of the greatest psychologists and scientists in other fields breadth of vision and research. In the world of investment, people who do not diversify risk bankruptcy. Is the field of psychological science

References

Amabile, T.M. (1996). Creativity in context. Boulder, CO: Westview. Csikszentmihalyi, M. (1996). Creativity: Flow and the psychology of discovery and invention. New York: HarperCollins.

Dreman, D. (1977). Psychology and the stock market. New York: Amacom. Gardner, H. (1993). Creating minds. New York: Basic Books.

Gruber, H. E. (1989). The evolving systems approach to creative work. In D. B. Wallace & H. E. Gruber (Eds.), Creative people at work: Twelve cognitive case studies (pp. 3-24). New York: Oxford University Press. terms of the number of grant proposals that are funded compared to the number submitted, and in comparison to overall budget levels in other areas of science.

Training is also affected by these disparities, Kraut told the subcommittee. "The underfunding of our fields has an impact beyond principal investigators whose proposals aren't being funded. It jeopardizes the supply of high-quality future investigators who would otherwise receive training under those grants," he said.

To help remedy this situation, Kraut asked Congress to support the establishment of small grants to new investigators, similar to the B/START (Behavioral Science Track Awards for Rapid Transition) mechanism used by several institutes at the National Institutes of Health.

APS's statement also described specific behavioral science initiatives that NSF is funding in FY 99. For example, behavioral science is the focus of about a quarter of the grants being funded under NSF's Knowledge and Distributed Intelligence initiative. Some of those researchers will be mapping brain function and cognition; while others will be refining ways that virtual environments can be used to study perception, learning, and even social interactions. In other NSF initiatives, psychological scientists are investigating the individual and social processes that influence learning, ranging from brain processes involved in memory and perception, to such issues as peer pressure, family, and cultural factors that affect learning.

"The increase we are requesting will allow NSF to increase the number of grants funded under these initiatives," said Kraut. "Plus," he added, "the agency will be able to launch additional initiatives in FY 2000," such as a proposed initiative in cognitive neuroscience that would combine the latest behavioral science theories and techniques with modern neuroimaging and neuroscience research to broaden our knowledge of mental processes and brain function.

Sarah Brookhart

The full text of the APS statement on FY 2000 appropriations for NSF is available at the APS Website: www.psychologicalscience.org. For further information on NSF funding opportunities in the behavioral and social sciences, see NSF's Website: www.nsf.gov.

Rilling, M. (1996). The mystery of the vanished citations: James McConnell's forgotten 1960s quest for planarian learning, a biochemical engram and celebrity. *American Psychologist*, 51, 589-598.

- Ruksznis, E. (1999). Interdisciplinarity: Psychology + X. APS Observer, 12(3), 1, 8-11.
- Simonton, D.K. (1994). Greatness: Who makes history and why? New York: Guilford.
- Sternberg, R. J. (1997a). Fads in psychology: What we can do. APA Monitor, 28(7), 19.
- Sternberg, R. J. (1997b). Successful intelligence. New York: Plume.
- Sternberg, R. J., & Lubart, T. I. (1995). *Defying the crowd: Cultivating creativity in a culture of conformity.* New York: Free Press.
- Sternberg, R. J., & Lubart, T. I. (1996). Investing in creativity. American Psychologist, 51, 677-688.

Contributor Note: Preparation of this article was supported under the Javits Act Program (Grant No. R206R50001) as administered by the Office of Educational Research and Improvement, U.S. Department of Education. Grantees undertaking such projects are encouraged to express freely their professional judgment. This article, therefore, does not necessarily represent the position or policies of the Office of Educational Research and Improvement or the U.S. Department of Education, and no official endorsement should be inferred. Requests for reprints should be sent to Robert J. Sternberg, Department of Psychology, Yale University, P.O. Box 208205, New Haven, CT 06520-8205



PRESS FROM PAGE 1

found in media reports—in addition to some reporters and science writers—to find out what scientists can do to dispel any anxiety or hesitation and maximize their relationship with the media and its popular presentation of psychological science.

"We tend to be too modest about what we know and the implications of what we know," said Stanford University's Phil Zimbardo, an

APS Charter Fellow. "Many in the general public do not really have a clue as to what contemporary psychology is all about—how far we've come, how sophisticated our research methods are, and how truly based on data and replication our conclusions are. We have to be more aware that we have something important to say about human nature, society, and the human connection."



Zimbardo

APS Charter Fellow David Lykken, of the University of Minnesota, said that in

using the press to communicate psychological science, researchers are giving the public what it pays for.

"Science is paid for by citizenry in that most scientists are trained and salaried at public expense and most research grants come ultimately from the taxpayers," he said. "Moreover, psychology is the scientific endeavor most understandable and relevant to the general public. Therefore psychologists—especially academic psychologists have a duty to disseminate what they have learned from their research and study by writing books and the occasional op-ed piece and by being responsive to the media."

Lykken's sentiments were echoed by APS Member John Gottman, who added that ensuring the presence of psychology in people's lives develops public support and helps secure continued funding of research in the field.

Getting Their Attention . . . If You Want It

There are a couple of reasons the press might contact you. Perhaps someone has suggested you as an expert on a particular topic. Or, perhaps a journal is about to publish a paper of yours in which they are interested. Maybe they are responding to a press release that was issued by a particular journal, organization (like APS), or university press relations office. Or, perhaps you have dealt with a particular reporter over time on several stories and they want your thoughts on a particular story idea.

"Some kind of training would probably be very helpful to many psychologists," said APS Charter Fellow Kelly Brownell, of Yale University. "With the growing recognition in the general culture that psychology is not only important but that it intersects with other areas, like medicine, you are seeing more and more coverage of psychological science."

APS Member Robert Provine, of the University of Maryland-Baltimore County, is often contacted by the press regarding his research on humor and laughter. He predicts more demand for behavioral science stories in the press.

"With all of the cable options out there, there is a lot more channel capacity and so there is going to be an increasing demand for content," he said. "There are channels now devoted to science issues, such as *Discovery* and *The Learning Channel* and there will be increasing opportunity for people to speak about their work."

So, let's say a journal is publishing an article of yours next month that you think contains research exciting enough and important enough to warrant the interest of the general public. What can you do?

The first step would be developing a press release. This is something that you can try to write yourself, or you can contact your university's or institution's public relations office.

"Usually most institutions have public relations offices and they are generally geared up to issue press releases to the local and national press," said Brownell.

Zimbardo thinks there is room for improvement within the field in developing and issuing press releases of behavioral science findings.

"The most important thing we are *not* doing now is sending out press releases and that is something psychologists should be much more engaged in," he said. "Learn to write press releases: keep it to one page and be sure to make your critical finding is the first sentence. It has got to be a significant finding, but if you think it is worthwhile, then run it to the press service that most universities and research centers have. They can screen what you have, help refine it, and distribute it."

If you have an already established relationship with a reporter, writer, or producer, contact them and let them know about your research or new finding.

"I get very good, interesting, and timely press releases from the

behavioral sciences," said *Newsweek*'s Sharon Begley, who says that email and fax are the best ways to contact her to pitch a story or send a release. "For my own purposes, a story that is connected to a paper in a journal or one being presented at a conference help me get a story in because it is timely. I am very open to people contacting me and telling me a paper is coming out in a journal or at a meeting. I very much appreciate these sorts of heads up and ask only that



Brownell

people differentiate between run-of-the-mill research and something that is truly important. For the most part, researchers—and this goes for people in every field—seem to shy away from that. They seem to think that it is marketing or something they should not be doing."

Gottman said marketing their research to the public is exactly what scientists should be doing. "There are a lot of shysters out there pushing stuff that is worthless," he said. "Why shouldn't the public be exposed to the best research findings in the field? Academics should be out there talking to the public instead of leaving them with the phony pop fluff that is out there. We have a moral responsibility to communicate research findings, thoughts, and ideas, and plans to the public."

"Hi, this is the New York Times Calling . . ."

So you have issued your press release or have somehow gotten your name out there as the expert in a particular area. Now you find yourself on the other end of that call by the reporter who is doing a story on eating disorders in men, isolation and the rise of the Internet, or gleaned from the APS media call log—how children are affected by watching professional wrestling on television. What can you expect?

In most cases, it is probably a reporter-or, if it is television, a



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producer—from either the scientific media (for example, *Scientific American, Discovery, Nova,* and *Psychology Today*) or mainstream media (including newspapers such as *The New York Times* or *The Baltimore Sun,* magazines from *Women's Day* to *GQ* to *People,* and television news magazine shows such as 20/20 and *Dateline NBC*). Reporters may be general assignment reporters or science writers who are familiar with the scientific method and used to covering often complex subjects in a way that is easily digestible to the public.

Zimbardo, who has worked with the media for many years, says that today's press is more sophisticated.

"Reporters are more knowledgeable," he said. "They are more likely to have more background in critical and analytical thinking. They ask better questions. My feeling is that there has been an improvement in the media's presentation of science reporting and psychology reporting and there are also more reports of psychological research in the media than there has been in the past, which is a positive trend."

Brownell said that it is important to remember that members of the press have a difficult job.

"Most writers have to deal with many different topics that change by the day or even by the hour," he said. "Science writers, for example, may write about psychology one day, a volcano the next, and Alzheimer's Disease after that. Because of this, they have to try to become experts in a very short period of time and they have to sift through different stories told by different people with different points of view. I can imagine being in their position and finding it hard to understand what is credible information when one expert says A and the other says B."

Provine notes that while different media have different styles, needs, and interests, certain basic truths should be considered.

"Whatever kind of reporter you are working with, you are engaged in a collaboration. The most successful results emerge from collaborations in which you and the reporter are working together to tell the best possible story. Sometimes scientists don't listen carefully enough

to the questions reporters ask them and, conversely, sometimes reporters do not ask the best questions. Whatever the format or medium, it won't work well if you don't listen to what the reporter is asking and they don't respond in a sensitive way to what you are saying."



Provine

"You are essentially increasing your class

Provine said he feels that working with

the media enlarges the scope of the teaching

mission.

size from a few hundred students a semester to millions," he said. "I have always had an interest in the popular presentation of science and I am concerned with doing it and doing it well. It is a neglected aspect of our educational mission."

An unexpected benefit of speaking with reporters, said several psychologists, is the position of a question or research direction that the scientist may not have considered.

"One of the pleasures of working with the press is if it is a good reporter, they will ask questions you may not have thought about or see implications in your research that you may not have thought of," said Zimbardo. "As scientists, we tend to focus more narrowly on our research. Meanwhile, the press is trying to look at the big picture-how this research is significant and how it is relevant."

Provine agrees and says that the best writers and reporters would probably make good scientists themselves.

"I have found them to almost universally be quick reads and I have generally been impressed with the intelligence and integrity of media people I have worked with," he said. "The best of them are extraordinary and I wish they were colleagues of mine working in the lab

because when you tell them you are doing A and B, they ask you, 'what about C and D.'"

That's Not What I Meant

However talented and well-meaning the writer, though, there are occasions when the media-scientist relationship goes sour. An academic's schedule does not always fit in with a reporter's deadlines. Or perhaps research is oversimplified or results are exaggerated. Or maybe, after talking to a reporter for an hour on a subject, you find



Lykken

yourself only briefly mentioned in passing in the article. Or perhaps and this fear probably lurks somewhere in most potential researcherspokesperson—you have been misquoted or quoted out of context.

Zimbardo shared an experience he had with a reporter from *The New York Times* in 1968 that illustrates how a well-meaning comment can take on a life of its own.

"A reporter who is now very well known was sent by his editor to do a story for the next day on the rising use of obscenities among women. I said I had not been aware of any research on it, nor knew of anyone who was or would be studying it, but he persisted and begged. His deadline was coming up. Apparently his boss was cursed out by a woman the night before at a cocktail party and wanted to know if it was something about him or if it was a phenomenon in the making. I said the only thing I might offer is that some years ago as a student in an abnormal psych course we visited Middletown State Mental Hospital and on the back wards, schizophrenic female patients were often very obscene and demonstrative when the class walked through the wards, compared to male back ward patients.

"The reporter took that and ran with it, worked it into his story as a major evidence, distorting what I had said to make it more general. Then, because *The New York Times* reported it, the generalization became more extreme in each subsequent reporting in other papers and magazines including *Newsweek* and *Playboy*," Zimbardo said and acknowledged that while this is a worst case scenario, psychologists need to conduct themselves carefully to ensure that their research is clearly and correctly conveyed.

Provine puts the responsibility for misquoting or having something taken out of context on the scientist.

"I think this is in large part self-inflicted in that if you say things that can easily be taken out of context, it might just happen," he said. "You have control over what you say. A key in making sure the story you want to tell is the story that is told is to simplify the presentation. For example, state three main points up front that summarize the research in which you are engaged."

In order to maximize any communication you might have with the

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press, preserve your message, and prevent misquoting, the Observer provides the following tips:

1) Know who you are talking to and what they are looking for.

"If the *National Enquirer* interviews you and you agree, don't protest later that they transformed your research on mating behavior in the golden hamster into 'Ten Ways to Improve Your Sex Life in Marriage,''' said Carol Tavris, an APS Charter Fellow and also a science writer for major publications.

Who is contacting you? Is it a magazine? A newspaper? A producer for a television news show?

What kind of story is it? How long will it be? What is the deadline? If it is for a television or radio show, how much time will you have to speak?

"Establish these things right up front," said Zimbardo. "Find out the gist of the story and what it is they want from you. Do they want in depth discussion from you or will they only use a sentence? They might be polite and let you run off at the mouth when in fact, all they want it one comment. Set the ground rules up front."

Adds Marilyn Elias, a health and behavior reporter for USA Today: "Assess the scope of the story. Is this something where the reporter is looking for a little bit of added insight or are they looking for something more in depth. As a scientist, your time is valuable and you don't want to spend 40 minutes talking to someone when they are just looking for a few comments on a specific area. Ask about the scope for the story and then tailor the length of your comments accordingly."

Also, find out how much the reporter knows on the subject.

"Very often you are being interviewed by someone who has not read your book or your article and they do not know anything about what you have done," said Gottman. "Find out if they have done their homework."

2) Be timely.

A daily newspaper reporter's timetable is different than an academic's timetable. When you get a press call, call them back in a timely manner and find out what the deadlines and time allotments are. If the story goes to press on Tuesday, calling back on Wednesday is a waste of time—yours and the reporter's.



Tavris

3) If you don't know, suggest someone else.

Elias says that if a reporter contacts you for a story for which you do not have relevant expertise, refer them to someone who does.

"Do not try and talk off the cuff based on opinions," she said. "If you are not familiar with the literature, don't feel that you need to say something. I think the reporter will really appreciate it if you instead refer them to someone who has a depth of knowledge on the topic."

Structure and discuss your research or information in a clear and understandable way.

For the most part—though there are exceptions such as Tavris reporters and writers are not scientists and do not have PhDs in the areas on which they may be contacting you. Use language that is clear and as non-technical as possible.

"You don't have to dumb-down but you do have to be able to communicate in everyday language. In general, academics are not used to doing this," said Gottman.

Lykken suggests preparing your comments in ways so they are likely to be used.

"The lay person is going to have problems with the concept of heritability, for example, and 'percent of variance accounted for by genetic variation' won't hack it," he said. "It is also wise to prepare the

meat of your message in sound bites, or brief, punchy phrases or sentences that are likely to be quoted rather than distorted."

Not only is it important to use clear language, but you want to make sure your thoughts are structured and not rambling.



Gottman

"If you cannot clearly articulate a few points about what you are doing, perhaps you don't fully understand it yourself. Taking the effort to simplify and clarify not only helps to tell a better story, but it can be professionally useful as well," said Provine. "If you are

asked what you are doing and it unleashes a stream of material, this forces the reporter to seek structure in this. The structure they find may not be the structure you intended."

Zimbardo suggests mentally (or even on paper) organizing your thoughts in an outline format and presenting them that way.

5) Remember the big picture.

Newsweek's Begley made two suggestions to psychologists who present their research to reporters: demonstrate how the finding or research is surprising; and demonstrate how it fits into some larger picture of how people live and work.

"Anytime they can extend their findings into something broader than their own slice of the research universe, it helps," she said.

Conclusion

Actively presenting your research to the press is not for everyone, but for those that are open to the press-scientist relationship, it can be a great way of disseminating good scientific psychological research to the public.

"It is usually a two-way street," said Gottman. "I learn things from interviews with the press. I find that 99 percent of the time, the journalists I talk to are intelligent people who are honestly trying to communicate to the public and it has been very, very good for me to learn how to talk about my research to the layperson and not just the fellow scientist."

Brownell says that he concerns himself more with the big picture message of what the article is trying to convey, rather than small details that may not have been captured.

"It takes time. Some people are skeptical and feel that this is not their job," he said. "Some may be uncomfortable in front of a microphone or television camera. For my colleagues who feel that way, I think it is perfectly fine for them. Not everyone needs to be out there with the press, but as a field, we benefit from getting our information out there."

Elizabeth Ruksznis

Announcements

ANNOUNCEMENTS

The Summer Institute in Political Psychology (SIPP) will be held July 25-Aug. 20, 1999 at the Ohio State University campus in Columbus, OH. SIPP is a four-week intensive training program that introduces graduate students, faculty members, and professionals to the world of political psychology scholarship. Total enrollment is about 55. Contact: Andrea Grove, tel.: 614-292-4967; fax: 614-292-1146; email: grove.27@osu.edu; http:// psweb.sbs.ohio-state.edu/sipp.htm.

CALL FOR APPLICATIONS

The Klingenstein Third Generation Foundation strives to improve the lives of families afflicted by clinical depression. The Foundation awards a two-year fellowship in the amount of \$30,000 a year for work in the area of child and adolescent depression. Grantees should submit a letter which succinctly describes the project and amount sought and explains why the project is significant. Contact: Sally Klingenstein, Executive Director, The Klingenstein Third Generation Foundation, 787 Seventh Ave., 6th Floor, NY, NY 10019; tel.: 212-492-6179; fax: 212-492-7007.

2000-2001 Fulbright Awards for U.S. Faculty and Professionals. Opportunities for lecturing or advanced research in nearly 130 countries are available to college and university faculty and professionals outside academe. Deadlines: Aug. 1, 1999 for lecturing and research grants in academic year 2000-2001. Nov. 1, 1999 for international education and academic administrator seminars, Jan. 1, 2000 for NATO advanced research fellowships and institutional grants. Contact: USIA Fulbright Scholar Program, Council for International Exchange of Scholars, 3007 Tilden St., NW, Ste 5L, Box GNEWS, Washington, DC 20008-3009; www.cies.org.

Princeton University, the University Center for Human Values, invites applications for Laurance S. Rockefeller Visiting Fellowships. Several Rockefeller Visiting Fellowships will be awarded for the academic year 2000-2001 to outstanding teachers and scholars who are interested in devoting a year in residence at Princeton to write about ethics and human values. Fellows participate in a Fellows' seminar, a seminar in Ethics and Public Affairs, and other programs of the University Center. Fellowships extend from Sept.-May. Applicants are expected to have a doctorate or professional post-graduate degree and cannot be in the process of writing a dissertation. Deadline: De-cember 15, 1999 for fellowships beginning September 2000. Recipients will be notified by March 15, 2000. Contact: Valerie Kanka, Univ. Center for Human Values, Louis Marx Hall, Princeton University, Princeton, NJ 08544; tel.: 609-258-4798; vjkanka@wws.princeton.edu; http://www. princeton.edu/values/.

Entries are invited for the **10th Annual Psychology Department Newsletter Contest**, sponsored by the Nova Southeastern University Behavioral Sciences Department. Submit a newsletter from 1998-99 academic year to John Malouff, NSU Behavioral Sciences, 3301 College Avenue, Ft.

New AFSP Grants for Suicide Research to include Funding for Mentors. The American Foundation for Suicide Prevention (AFPS) has announced new grants. The available grants are for suicide research designed to encourage and develop the careers of young investigators interested in understanding and preventing suicide. Research grants for up to \$30,000 per year for two years will be supplemented by \$5,000 a year to be given to a mentor when the primary applicant is at the level of assistant professor or lower. Pilot grants and postdoctoral grants are also available. Pilot Grants for up to \$10,000 a year for a maximum of two years are intended to help develop preliminary data for the submission of larger funding requests and to enable investigators to pursue promising leads that emerge from their other investigations. Postdoctoral Research Grants are training grants also designed to enable young investigators to qualify for independent careers in suicide research. Postdoctoral Grants (which provide a \$22,000 stipend-\$24,000 in the second year) are available to applicants who have not completed more than three years of postdoctoral research fellowship support. Contact: 800-333-AFSP.

CALL FOR PAPERS

Sexuality & Culture is a quarterly interdisciplinary journal published by Transaction Publishers at Rutgers University. In its fourth year of publication, the journal welcomes the submission of original manuscripts dealing with issues of sexuality and culture. These issues include—but are not limited to: sexual consent and sexual responsibility; sexual harassment and freedom of speech and association; sexual privacy; censorship and pornography; impact of film/literature on sexual relationships; and university and governmental regulation of intimate relationships. For further information, visit the journal's web site at www.csulb.edu/ ~asc/journal.html. Manuscripts should be doublespaced and should include a summary of approximately 200 words. Citations should be in the author-year format (e.g.: Smith, 1998). Four copies of the manuscript should be submitted to the Managing Editor: Roberto Refinetti, Sexuality & Culture, 504 Lake Colony Drive, Birmingham, AL 35242; email: refinetti@msn.com.

Information Security for the Next Millennium

(EICAR) is issuing a call for papers to be presented at its 2000 Annual Meeting to be held March 4 - 7, 2000, in Brussels, Belgium. Papers (research or research in progress), case studies and symposia report about issues pertaining to malicious code, network security, biometrics, unwanted side-effects or malfunction, information age and society, cryptography and the protection of privacy, new media, and e-commerce. Subject matter may be theoretical, empirical, or methodology oriented. SUBMISSION DEADLINE is July 1, 1999 and a Best Paper Proceedings will be available at the conference. Contact: call@conference.eicar.dk; http://www.eicar.dk/call.html.

CALL FOR PRESENTATIONS

Head Starts Fifth National Research Conference will be held June 28-July 1, 2000. The program committee invites proposals for presentations for this conference. These presentations may be either recent research, published or unpublished, or a synthesis of findings already in the literature. Both symposia and poster presentations are invited. The central theme of the conference focuses on the continuities and transitions of early development and contextual transitions affecting the health and well being of young children. For more information, please see: http:// cpmcnet.columbia.edu/dept/sph/popfam/ headstartconf.html or http://www2.acf.dhhs.gov/ programs/hsb/.

Y2K FROM PAGE 31

NIH's Seaman added this, "I don't think I will stockpile food anymore than I usually do. I don't see this as being a terrible thing. I think that there will be some problems and annoyances. The idea of keeping copies of your financial statements and your bills is a good idea, but I am not that concerned. I am not an alarmist."

UVA's Taylor sees a different problem.

"The main thing that is frightening about the Y2K problem to me is that it can serve as a paradigm for the way we confront so many societal and environmental problems," he said. "It was known very early on that the Y2K difficulty would eventually arise. Rather than address it when it was still of manageable size, however, it was ignored until the last possible moment. Now, because of that prolonged disregard, it is clear that some people—and maybe a great many people—are going to be seriously harmed. How many other problems are looming on the horizon that we will ignore until it becomes inevitable that a great deal of damage will be done?

"On a more optimistic note, though, I don't think most people's daily lives in the United States, including my own, are going to be very seriously affected by the Y2K problem, and I have no intention of altering any of my own routines or plans because of it."

Kristen Bourke

Meeting Calendar*

June

The International Association for **Conflict Management** San Sebastian, Spain June 20-23, 1999 Contact: William P. Bottom, Olin School of Business, Washington

University, One Brookings Drive, St. Louis, MO 63130; tel.: 314-935-6351; fax: 314-935-6359; email: bottom@mail.olin. wustl.edu

1999 LSA Linguistic Institute

Urbana-Champaign, Illinois June 21- July 30, 1999 Contact: LSA Secretariat; email: lsa@lsadc.org; fax: 202-835-1717; http://www.lsadc.org ; http:// www.beckman

5th International Conference on Functional Mapping of the Human Brain

Dusseldorf, Germany June 23-26, 1999 Contact: CPO Hanser Service; tel.: 49 40 670 88 20

CUR Annual Councilor Meeting Duluth, Minnesota June 23-26, 1999 Contact: www.cur.org.

The Research Society on Alcoholism

Santa Barbara, California June 26 - July 1, 1999 Contact: Debra Sharp, Director; tel.: 512-454-0022; email: debbyrsa@bga.com; www.rsa.am

Association for Health Services Research 16th Annual Meeting

Chicago, Illinois June 27-29,1999 Contact: AHSR; tel.: 202-223-2477

1999 Summer Institute Family

Research Consortium III Bretton Woods, New Hampshire Bretton woods, ivew framponic June 24-27, 1999 Contact: Dee Frisque, tel.: 814-863-7108; fax: 814-863-7109; email: dmr10@psu.edu

3rd Australian Industrial and Organi-zational Psychology Conference Brisbane, Queensland, Australia June 26-27, 1999

Contact: Conference Secretariat, tel.: 61 7 3846 5858; fax: 61-7-3846-5859; email: kcross@eventcorp.com.au; http://www.ozemail.com.au/~evc/iop

Animal Behavior Society

Lewisburg, Pennsylvania June 26-July 1, 1999 Contact: Michael Pereira, tel.: 717-524-1430; mpereira@bucknell.edu; www.cisab.indiana.edu/ABS/ index.html

The Research Society on Alcoholism

Santa Barbara, California June 26 - July 1, 1999 Contact: Debra Sharp, Director; tel.: 512-454-0022; email: debbyrsa@bga.com; www.rsa.am

Association for Health Services Research 16th Annual Meeting Chicago, Illinois June 27-29,1999 Contact: AHSR: tel.: 202-223-2477

Summer Institute On Community Ori-

ented Primary Care Washington, DC June 27-July 10, 1999 Contact: http:// learn.gwumc.edu/sphhs/ copcdocs/summer.htm

Eleventh Annual Conference of the International Society for Humor

- Studies, Oakland, California June 29- July 3, 1999 Contact: Martin D. Lampert, Psychology Dept., Holy Names College, 3500 Mountain Blvd., Oakland, CA 94619-1699; tel.: 510-436-1699; email: humor99@academ.hnc.edu; http:// www.hnc.edu/events/humor99

July

Behavior Genetics Association

Vancouver, British Columbia, Canada July 3-7, 1999

Contact: Richard J. Rose, Dept. of Psych., Indiana Univ., Bloomington, IN 47405-1301; fax: 812-855-4691; email: rose@ indiana.edu

International Society for the Study of Individual Differences

Vancouver, British Columbia, Canada July 5-9, 1999

Contact: Kerry L. Jang, tel.: 604-822-7895; fax: 604-822-7756; email: kjang@ unixg.ubc.ca

19th O.D. World Congress

Harare, Zimbabwe, Africa July 12-17, 1999

- Contact: Donald W. Cole; tel.: 440-729-7419; email: DonWCole@aol.com; http://members.aol.com/ODInst
- Satellite Symposium Drug Abuse and AIDS: Intertwined Epidemics Spon-sored by the National Institute on Drug Abuse (NIDA), National Institutes of Health (NIH)
- Ottawa, Ontario, Canada July 15, 1999
- Contact: Kathleen Janson, Management Assistance Corporation, tel.: 301-468-6008 x432; fax: 301-468-3364; email: kjanson@mac1988.com

International Society of Political Psy-chology 22nd Annual Scientific Meeting

Amsterdam, The Netherlands July 18-21, 1999 Contact: Christ'l De Landtsheer; email: delandtsheer@pscw.uva.nl; Bert Klandermans; email: pg.klandermans @psy.vu.nl; PROGRAM CHAIR: Sam McFarland; tel.: 502 754-4408; Fax: 502 745-6934; email: sam.mcfarland @wku.edu

Korean American Adoption Community (KAAN) First National Conference

Los Angeles, California July 23-25 1999

Contact: Chris Winston, 874 Phillip Ct., El Dorado Hills, CA 95762; tel.: 916-933-1447; KAANet@aol.com

Society for Chaos Theory in Psychology and Life Sciences Berkeley, California July 23-26, 1999

- Contact: Bob Porter, email: rjpps@uno.edu; http://www.vanderbilt.edu/AnS/psychology/cogsci/chaos/

Research Training in Psychology

of Aging Duluth, Minnesota

- July 25-August 5, 1999
- Contact: Chandra M. Mehrotra, tel.: 218-723-6161

32nd Annual Meeting of the Society for Mathematical Psychology

- Santa Cruz, California
- Santa Chuz, Cantonna July 29- August 1, 1999 Contact: Michael J. Wenger, Dept., of Psych., Social Sciences 2, Univ. of California-Santa Cruz, Santa Cruz, CA 95064; tel.: 831-459-5679; email: mjwenger@cats.ucsc.edu; http:// psych.ucsc.edu/~mjwenger/mp99/

Institute on Religion in an Age of Science

Institute on Kengion II an Age of Science Star Island, New Hampshire July 31-August 7, 1999 Contact: Bonnie Falla, Registrar, 810 1/2 North 9th St, Allentown, PA 18102; tel.: 610-432-8711; email: mebjf01 @moravian.edu

August

International Coalition Against Sexual Harassment (formerly SASH)

Chicago, Illinois August 7-8, 1999

- ntact: James Gruber, email: jegruber@umd.umich.edu; Susan Contact: Fineran, email: sfineran@ bu.edu

The 9th Annual Meeting of the Society for Text and Discourse

Vancouver, British Columbia, Canada

August 15-17, 1999 Contact: Dani McKinney, Department of Psychology, 1202 W. Johnson St., Madison, WI 53706; tel.: 608-262-6989; fax: 608-262-4029; email: textdis@ macc.wisc.edu

The 57th Annual Convention of the International Council of Psychologists Salem, Massachusetts

- August 15-19, 1999 Contact: Joan C. Chrisler, Department of Psychology, Connecticut College, New London, CT 06320; tel: 860-439-2336; fax: 860-439-5300; email:

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APS OBSERVER American Psychological Society

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Employment Bulletin May/June 1999

NATIONAL

RADIO SHOW HOST wanted Monday-Friday, 2 hours per day, broadcast from your own area. Quick-thinking, talented person. Call the Psychology Network, 800-965-3714. 20801 Biscayne Blvd. #400, Aventura, FL 33180. Fax 305-937-5047. NA1

ALABAMA

DIRECTOR OF MEDICAL/ CLINICAL PSYCHOLOGY PROGRAM: THE UNIVER-SITY OF ALABAMA AT BIR-MINGHAM is seeking a tenured full professor or advanced associate professor to direct its doctoral program in Medical / Clinical Psychology. This is a unique APAapproved Boulder-model clinical psychology training program which emphasizes clinical applications and research at the interface of psychology, biology, and medical ill-ness and health. The program is a combined effort of some 45 faculty in the Department of Psychology and in various departments of the School of Medicine. The professional community is also highly supportive of the program. We are seeking a senior-level individual who combines an established and funded research program with clinical training and/or clinical practice experience. Area of specialization is open. Primary appointment will be in the Department of Psychology, with secondary appointments in appropriate medical departments. UAB strongly encourages collaboration across programs, departments, and schools. Collaborative opportunities are available within UAB's Civitan International Research Center (human development and developmental disabilities), the Comprehensive Cancer Center, the Center for Aging, the AIDS Center, the Vision Science Research Center, the Comprehensive Head Injury Center, the Center for Outcomes and Effectiveness Research and Education, the Dental School, the School of Public Health, and various departments within the university's internationally re-

spected medical center. UAB is an Equal Opportunity/Affirmative Action employer, and qualified minority candidates are encouraged to apply. Send letter of interest, vita, representative reprints, and the names of at least three references to Carl E. McFarland, Jr., Chair, Department of Psychology, 415 Campbell Hall, University of Alabama at Birmingham, Birmingham, AL 35294-1170. Informal inquiries may be directed to Dr. McFarland (cmcfarla@uab.edu, 205-934-3850), or to Edwin Cook (ecook@uab.edu, 205-934-8283) or J. Scott Richards (richards@sun. rehabm.uab.edu, 205-934-3454), the Interim Co-directors of Clinical Training. We will continue to consider applications until the position is filled. AL1

CALIFORNIA

Visiting Assistant Professor in Psychology and Asian American Studies: POMONA COLLEGE invites applications for a one-year sabbatical replacement position beginning August 1999. Courses will include: Two courses in Asian American Psychology, one course in Research Methods or Introductory Statistics, one course or seminar in field of specialization, and supervision of senior theses. Evidence of teaching excellence is required. Pomona College is a highly selective, liberal arts college located 35 miles east of Los Angeles, attracting a diverse, national student body. Pomona College has a strong commitment to faculty teaching and research; these activities are mutually enhancing in our setting. Pomona College is the founding member of the Claremont Colleges and is nationally recognized for its strength in the sciences and international study. Applicants should send a letter, Curriculum Vitae, reprints, teaching evaluations, and three letters of recommendation to Patricia Smiley, Chair, Department of Psychology, Pomona College, Claremont, CA 91711. Review of applications will begin immediately and continue until the position is filled. Pomona College is an equal opportunity,

affirmative action employer. Women and minority applicants are especially encouraged. CA1

POSTDOCTORAL FELLOW: The Spoken Language Processes Laboratory of the HOUSE EAR **INSTITUTE** (a private non-profit research institute) has an opening for a full-time scientist to participate in NIH-and NSF-funded research on auditory, visual, and vibrotactile speech perception and word recognition. The position is available immediately. Qualifications include a Ph.D. in a relevant academic area such as speech perception or psycholinguistics. Candidates with strong background in experimental methods, statistics, and mathematics are being sought. Competitive salary scale. Applicants should send curriculum vitae and three reference letters to: Dr. L.E. Bernstein, House Ear Institute, 2100 W. Third St., Los Angeles, CA 90057.CA2

NASA AMES RESEARCH CEN-TER has several National Research Council postdoctoral fellowships for collaborative research in the general area of attention and human performance. Extra consideration will be given to candidates with demonstrated interest in: 1) spatial attention, 2) eye movements, 2) quantitative or computational modeling, or 3) multitask performance (dual-task or task switching). Candidates should have a Ph.D. in cognitive psychology, cognitive science, or a related field. Post-doctoral fellows are expected to collaborate with scientists in the Cognition Laboratory on basic research leading to publication in peer-reviewed journals. Opportunities for applied research are also available. Current starting salary is \$42,000 per year. Positions available in the summer of 1999. NASA Ames Research Center is located in Mountain View, CA, in the Silicon Valley. Send inquiries to Dr. Roger Remington (rremington@mail.arc nasa.gov), Dr. Eric Ruthruff (eruthruff@mail.arc.nasa.gov), or Dr. James Johnston (jcjohnston@ mail.arc.nasa.gov). CA3

FLORIDA

POSTDOCTORAL FELLOW-SHIPS IN ADOLESCENT DRUG ABUSE TREATMENT RESEARCH. NIH/NIDA postdoctoral research training program at the UNIVERSITY OF MIAMI Center for Treatment Research on adolescent drug abuse. The goal of the program is to prepare postdoctoral fellows for research and academic positions by developing clinical research competencies in the specialty of adolescent drug abuse intervention research. Our research center conducts a range of treatment outcome and process studies with adolescents. Throughout the two-year program fellows become involved in one or more of the Center's studies, which frequently focus on treatment-related culturally specific aspects of African-American and Hispanic adolescents and families. Fellows also interact with leading intervention scientists in consultations and Center sponsored meetings, such as our Methodology Core Workgroup, and at national conferences. Fellows take part in an ongoing seminar on the program's core content areasadolescent drug abuse, contemporary treatment research, developmental psychology and developmental psychopathology, empirically supported family-based and other therapies for adolescent drug abuse, advances in statistical methods used in clinical studies, research funding, grant writing, writing for publication, and professional socialization issues pertaining to research careers. Fellows can also take advanced courses, most frequently these are in the advanced statistics and data analysis areas, and training is provided in the responsible conduct of science. Fellows work with senior investigators in developing new proposals in the Center and in the development of their own research ideas and proposals. Applicants must hold a Ph.D. or M.D. or other doctoral

See Subject Index and the index instructions on page 52.

American Psychological Society

1010 Vermont Ave, NW

Suite 1100

Washington, DC 20005-4907

202-783-2077





University of California San Francisco Department of Psychiatry -Langley Porter Psychiatric Institute

Child Research Psychologist

University of California, San Francisco: The Department of Psychiatry invites applications for an Assistant or Associate Professor in Residence position to begin on or after January 1, 2000. The position will be based at Langley Porter Psychiatric Institute, in the Division of Child and Adolescent Psychiatry. We seek a researcher with clinical and clinical research expertise in severe mental disorders in children or adolescents to develop a clinical research program focused on children from our very ethnically diverse urban environment. We prefer a demonstrated track record in research focused on either Attention-Deficit/Hyperactivity Disorder (ADHD) or childhood-onset affective disorders as documented by research grants and publications in peer-reviewed journals. Requirements include a Ph.D. in Clinical Psychology from an APA-accredited program, or equivalent, a California psychology license or license eligibility, demonstrated skills for working in a multidisciplinary setting, and relevant teaching skills and experience. The person chosen will become a research mentor in the Clinical Psychology Training Program. Applications for the position must be received by October 1, 1999, and are to include a curriculum vitae, selected reprints, and a short letter describing the applicant's research program, sent to: Ricardo F. Muñoz, Ph.D., Search Committee Chair, c/o David Bell, Program Administrator, 401 Parnassus Avenue, Box CAS-0984, San Francisco, CA 94143-0984. Candidates must also arrange to have at least three letters of recommendation sent to the same address. The University of California is an Equal Opportunity Employer committed to excellence through diversity. CA4

degree, have demonstrated research abilities, strong writing skills, and an interest in treatment research with adolescents. To apply, request an application form from: Dr. Howard Liddle, Professor and Director, Center for Treatment Research on Adolescent Drug Abuse, University of Miami School of Medicine, 1425 NW 10th Ave., 3rd Floor, Miami, FL 33156. Email: hliddle@med.miami.edu. FL1

ILLINOIS

VISITING ASSISTANT PRO-FESSOR-ILLINOIS WESLE-YAN UNIVERSITY seeks applicants for two entry-level one year positions beginning Fall, 1999. Ph.D. preferred, ABD considered. Must be able to teach Introductory Psychology and either Child and Adolescent Development or Cognitive Psychology. Ability to teach a three week intensive specialty course is also desirable. Illinois Wesleyan is a selective undergraduate liberal arts college. Applications will be reviewed as they are

WELLS FARGO Fast Then. Fast Now.

CONSUMER RESEARCH LAB MANAGER

Since 1852, Wells Fargo has been known for speed. We started with express delivery and banking services that connected the cities of the west, and progressed to delivering exciting products and services that define new frontiers in banking. While others are striving for future success, we've already defined it. That's why we're offering career opportunities in line with your future - now.

Wells Fargo Bank is enhancing the ATM to sell more products and services. The Bank is settingup the first bank-owned and operated Customer Research & Technology Center, a facility that combines focus group and actual ATMs where we can conduct controlled studies on marketing issues. The Consumer Lab Manager will be responsible for managing this facility in Pleasant Hill, CA.

In this position you will be responsible for designing studies, and analyze behavioral and questionnaire data. Schedule customer studies and coordinate research activities. Manage outside market research suppliers who will recruit for research studies. Select or manage the selection of customers via computer for studies using the Bank's computer files. Maintain the Express Banking Marketing and Business Development Information Library. Ability to work alone and evenings required. Understanding of behavioral/ marketing research and experimental design/basic statistics. Master degree or higher in quantitative science research or MBA with specialization in market research studies preferred.

To apply, please send your resume to 111 Sutter St. 8th Flr., S.F., CA 94104 or fax to (415) 646-9397. E-mail Medwards@wellsfargo.com. For continuing updates, please visit our web page at www.wellsfargo.com.

> Equal Opportunity Employer and encourages all applications (M/F/D/V). CA5

Anticipated opening Assistant Professor (tenure track) of Developmental, Educational, and Cognitive Psychology

AMERICAN INTERNATIONAL COLLEGE

Springfield, Massachusetts, beginning in the Fall, 1999

Responsibilities:

Teach four courses per semester. Course might include developmental, educational, and introductory. Nine-month position with opportunities to teach summer and graduate courses.

Qualifications:

Ph.D. in psychology preferred (ABD considered) with demonstrated teaching ability. Primary interest in teaching with commitment to undergraduate education.

American International College is a small, primarily undergraduate institution in Western Massachusetts, convenient to rural New England, Boston, Albany, and New York City.

The college is a non-discriminatory affirmative action institute of higher education.

Applicants should send vita, graduate transcript, and names of three references to:

Dean C. Gerald Weaver American International College 1000 State Street Box 16L Springfield, MA 01109

MA2

received. To apply, send a cover letter, Vita, three letters of recommendation, and evidence of teaching excellence to Professor Doran French, Chair of Psychology, Illinois Wesleyan University, P. O. Box 2900, Bloomington, IL 61702-2900. Equal Opportunity Employer. For further information see our Jobs Web Page at http://www.iwu.edu/ ~iwujobs. IL1

NORTHWESTERN UNIVER-

SITY Cognitive Neuroscientist Position: The Cognitive Neurology and Alzheimer's Disease Center of Northwestern University is seeking a cognitive neuroscientist to join our multidisciplinary Brain Mapping Group. The successful candidate will join a team of neurologists, neuropsychologists, cognitive neuroscientists, and radiologists studying normal higher cognitive functions and dysfunction in stroke, epilepsy and dementia. The Center includes an active functional magnetic resonance imaging program, a new data analysis center with Unix, pc and mac workstations, a psychophysics and eye movement laboratory, an Alzheimer's Disease Clinical Core, and a Behavioral Neurology clinic. Level of appointment commensurate with experience. The position is available immediately. Send letter of interest outlining experience, research goals, CV and 3 letters of reference to: M-Marsel Mesulam, M.D., Northwestern University, 320 E Superior Street, Searle 11-453, Chicago, IL 60611. AA/EOE IL3

KENTUCKY

DIRECTOR OF PSYCHOL-

OGY. The Appalachian Regional Healthcare Psychiatric Center which opened in 1993 and is located in Hazard, Kentucky, is seeking candidates for the full time position of Director of Psychology at this state-of-the-art 100 bed adult, dual-diagnosis psychiatric facility. The ARH Psychiatric Center is a facility of the Appalachian Regional Healthcare system and is a part of a medical center complex which also includes a 208 bed regional medical center located adjacent. The Director of Psychology position offers a unique opportunity for psychologists interested in program planning and innovative

Searle Center for **Teaching Excellence** Northwestern University Full-time research/administrative position, working with various pedagogical experiments, assisting faculty members in setting up such experiments, designing and conducting assessments, and writing/publishing results of experiments. Position funded for two years with possibility of a third year. Involves assisting with experiments already in progress in several departments, including biology and physics. Ph.D. in psychology, strong abilities with statistics, and research experience in the learning sciences or in higher education pedagogy preferred. Position offers competitive salary commensurate with experience, benefits, access to Northwestern's research facilities and opportunity to begin significant research program. Send letter of application, CV (with at least four references), sample publication or piece of research, and statement of teaching philosophy to: Ken Bain, Director, Searle Center for Teaching Excellence, 627 Dartmouth Place, Evanston, IL 60208-4181. For details: http:/ /president.scfte.nwu.edu/ psy.htm. IL2

service delivery to a rural population. Responsibilities/duties of this practice (70% clinical, 30% administrative) will include management of the department, providing psychological services, providing oversight for a predoctoral internship program, conducting staff education programs, and coordinating services with both referral programs and external agencies. We are seeking candidates who are licensed/ license-eligible in Kentucky, who have at least two years of postdoctoral experience (preferably in both clinical and administrative capacities), a doctorate in professional psychology granted by an APA accredited program, and commitment to rural health care. This unique opportunity is accompanied by a very attractive compensation and benefits package which includes fully paid family plan health insurance coverage, paid vacation, holiday and sick leave allotments. Paid site visit and a relocation allowance is available. Please send resume to: Marilyn Hamblin, ARH Network Center Human Resources Development Division, PO Box 8086, Lexington, KY 40533. E-mail: mhamblin@arh.org; FAX: 606-



226-2586; Telephone: 1-800-888-7045, Ext. 532. *EOE* Visit ARH on the WEB at: www.arh.org. **KY1**

MARYLAND

Postdoctoral Research Fellowships SUBSTANCE ABUSE BE-HAVIORAL PHARMACOL-**OGY RESEARCH AT JOHNS** HOPKINS Postdoctoral human research fellowships in a stimulating and productive environment with excellent resources. Prepares for a career as independent investigator. HUMAN LABORATORY STUDIES-behavioral and clinical pharmacology of abused drugs (abuse liability testing, drug discrimination, drug self-administration, physical dependence) and antidrug-abuse medications development. Opioids, cocaine, anxiolytics, caffeine, nicotine. CLINICAL TRIALS OF SUBSTANCE ABUSE TREATMENTS-controlled evaluations of pharmacotherapies and behavior therapies (esp. incentive-based therapies), and their interactions. Opioid, cocaine, nicotine, mixed/other dependence. Start Date: Flexible; some immediately. Eligibility: U.S. citizens or permanent residents. Minorities encouraged. Appropriate for experimental, physiol, biopsych, neuroscience, clinical. Stipends: USPHS/NIH stipend levels \$26-41K. Contact: George E. Bigelow, Ph.D., Roland Griffiths, Ph.D. or Maxine L. Stitzer, Ph.D.; BPRU, Behavioral Biology Research Center; 5510 Nathan Shock Drive; Johns Hopkins Bayview Campus; Baltimore, Maryland 21224-6823. (410) 550-0035; bigelow@jhmi. edu. MD1

Post-doctoral Fellowship in the Cognitive Neuroscience of Language and its Disorders Two-year post-doctoral fellowship available after July 1, 1999, at THE UNI-VERSITY OF MARYLAND SCHOOL OF MEDICINE, IN BALTIMORE, MARYLAND. Training opportunities will provide experience in the application of contemporary research methods (including computational modeling, cognitive neuropsychology, eventrelated potentials and functional neuroimaging) to the topic of normal and disordered language processing. Applicants with doctoral degrees in related basic science areas (cognitive psychology, neuroscience, linguistics, computer science, etc.) and clinical disciplines (speech/language pathology; clinical neuropsychology) are invited to



apply. Questions may be directed to rberndt@umaryland.edu. To apply, send HARD COPIES of C.V., names and addresses of three referees, and statement of research interests and career goals to: Rita S. Berndt, Ph.D., Department of Neurology, University of Maryland School of Medicine, 22 South Greene Street, Baltimore, Maryland 21201. Applications should be received by July 1, 1999, for full consideration. **MD2**

MASSACHUSETTS

ONE-YEAR POSITION IN PSY-CHOLOGY. THE COLLEGE **OF THE HOLY CROSS** invites applications for a one-year position in psychology to replace a faculty member on leave. Responsibilities include: teaching service courses such as Introductory Psychology and History & Systems and teaching specialty-area courses. Candidates should possess or be near completion of the Ph.D. Review will begin immediately and will continue until a suitable candidate is found. Materials must include a curriculum vita, recent reprints, a statement of teaching interests and philosophy, and three letters of recommendation, at least one of which comments on teaching or teaching potential. Send all materials to: Patricia Kramer, Chair, Psychology Department, College of the Holy Cross, PO 38A, Worcester, MA 01610. The College of the Holy Cross, a Jesuit undergraduate liberal arts institution with a strong commitment to scholarship, teaching, and service, is an Equal Opportunity/ADA/Affirmative Action employer. www.holycross.edu. MA1

POSTDOCTORAL FELLOW-SHIP IN COGNITIVE NEU-**ROPSYCHOLOGY** The Memory Disorders Research Center at BOS-TON UNIVERSITY is seeking a postdoctoral fellow in the area of cognitive neuropsychology starting in the summer/fall of 1999. The Center conducts research with neurological patients in order to elucidate the cognitive and neural bases of memory function. The candidate will participate in studies of impaired and preserved memory function in a variety of neurological groups. Opportunities exist for collaboration with researchers and clinicians within the Center as well as at affiliated hospitals. The candidate should have background in cognitive research, either in normal or in clinical populations. The Memory Disorders Research Center is located at the Boston VA Medical Center and is affiliated with Boston University School of Medicine. Competitive salary and benefits. Interested candidates should send CV and names of three references to Dr. Mieke Verfaellie (verf@bu.edu), MDRC, Boston VAMC (151A), Building 9, 150 S Huntington Avenue, Boston MA 02130. MA3

MICHIGAN

NORTHERN MICHIGAN UNI-VERSITY is pleased to announce an innovative post-doctoral teaching fellowship in the Department of Psychology. Our department is widely recognized for the quality of its undergraduate teaching which includes the active participation of students in faculty-directed research projects; we expect to be adding a Master's program (experimental) this year. The fellowship offers training in teaching a variety of undergraduate courses in psychology, two courses each semester. A formal mentoring program in all aspects of university teaching is a key element of this program which is in its second year. Research activity that involves students is expected and supported. The PhD. is required; we seek a candidate who has recently received the doctoral degree or who will have it in hand prior to the start of the fellowship. The salary is \$30,000 plus benefits per academic year, starting Aug 23,1999 and ending the first week of May, 2000. The fellowship is for one year, renewable for a second year. Candidates in any area of psychology are invited to apply; current departmental interests include: physiological, cognitive, behavioral, social, developmental and history of psychology. To apply, please send a letter of interest, CV, transcripts, at least 3 letters of reference and statements of teaching and research. This position will remain open until filled. Please visit our Web site at http://www.nmu. edu/psychology/psychhm.htm for additional information about our department. NMU is located in the heart of Michigan's scenic Upper Peninsula, a summer and winter vacation spot. Applications or inquiries should be directed to Prof. Harry A. Whitaker, Department of Psychology, Northern Michigan University, Marquette, Michigan 49855. E-mail inquiries are of course welcomed: hwhitake@nmu. edu. NMU is an equal opportunity, affirmative action employer and is strongly committed to increasing the diversity of its faculty. MI1

FERRIS STATE UNIVERSITY

- Two tenure-track positions in psychology in global and multicultural undergraduate curriculum. Succesful candidates must demonstrate potential for teaching excellence, be able to contribute to development of department, and have interpersonal and communication skills sufficient to be able to work effectively with a diverse array of students and colleagues. Positions available August, 1999. Salary competitive with other state-assisted Michigan universities. (JOB CODE OM-5820) requires at least an ABD in psyc with Ph.D. by May, 2000, and expertise in the psyc of gender, race/ethnicity, religion, human sexuality, and/or educ psyc. A Ph.D. in psyc, broad range of teaching experience, and ability to involve students in research preferred. (JOB CODE OM-5570) requires a Ph.D. in psyc with specialty in industrial/org or social/org, and expertise in the psyc of gender, race/ ethnicity, religion, and/or human sexuality, and evidence of quality teaching. Ability to involve students in research preferred. For more information, contact John P. Thorp, Ph.D., Head, Social Sciences at (616) 592-2735. Send cover letter, vita, unofficial transcripts, and three current letters of reference to: JOB CODE

JOB CODE_____, Human Resource Development, Ferris State University, 420 Oak Street, Prakken 150, Big Rapids, MI 49307. Review of applications begins June 14, 1999 and continues until position filled or August 15, 1999, whichever date is sooner. Final candidates required to furnish official transcripts. Visit our Web page at http://www.ferris.edu. An Equal Opportunity/Affirmative Action Employer. MI2

WAYNE STATE UNIVERSITY Postdoctoral Fellowship in Pain Research is available immediately for NIH funded research examining the neural and neuropharmacological mechanisms underlying pain and its suppression. Experience with brain stimulation, in vivo microdialysis, or extracellular unit recording is highly desirable. Salary is commensurate with NIH guidelines and experience. Send CV, concise statement of research interests and two letters of recommendation to Dr. George S. Borszcz, Department of Psychology, Wayne State University, 71 W. Warren Ave., Detroit, MI 48202. Fax: 313-577-7636. Email: gborszcz@sun. science.wayne.edu. WSU is an equal opportunity/affirmative action employer. All buildings, structures and vehicles at WSU are smoke-free. Wayne State University - People working together to provide quality service. MI3

MISSOURI

Assistant Professor - Department of Psychology, SOUTHWEST MISSOURI STATE UNIVER-SITY invites applications for a 12month tenure-track position beginning August, 1999. Applicant will be Assistant Director of the Learning Diagnostic Clinic and psychology faculty. The clinic evaluates and recommends accommodations for learning disabled students. A goal of the clinic is to provide therapeutic services to the local community in the near future. A Ph.D. or Ed.D. from a behaviorally oriented, APA-accredited program in clinical, counseling, or educational/ school psychology, eligibility for Missouri Licensure and experience evaluating and diagnosing Learning Disabilities are required. Clinical Responsibilities include conducting evaluations, program development, and supervising graduate students. Applicants must provide letter of application, curriculum vitae, evidence of teaching experience, and three letters of recommendation. Application review will begin June 15, 1999 and continue until position is filled. Submit to: Chair, LDC Search Committee, Department of Psychology, Southwest Missouri State University, 901 S. National Ave., Springfield, MO 65804-0095. Route email to SCC116f@mail.smsu.edu. AA/EOE. MO1

NEW YORK

CLARKSON UNIVERSITY School of Science, Department of Psychology, One-Year Position in Psychology. The Department of Psychology has a temporary position open for the 1999-2000 academic year. Seeking a candidate who can teach the following courses: General Psychology, Learning, and Developmental. An interest in teaching an introductory statistics course is also desirable, Teaching responsibilities are three courses per semester. Applications will be reviewed as received. Candidates should submit their vitae, evidence of teaching excellence, and three letters of recommendation to Search Committee, Department of Psychology, Clarkson University, Box 5825, Potsdam, NY 13699-5825. Clarkson University is an AA/EOE. POS#88-98. NY1

COLUMBIA UNIVERSITY seeks an Assistant Professor in the Department of Psychology, in the area of Cognitive Psychology. The appointment can begin July 1, 2000. Candidates should provide evidence of excellence in research and a strong commitment to both graduate and undergraduate education. Applicants should submit their vitae, copies of relevant papers, and arrange to have three letters of reference sent to the Cognitive Psychology Search Committee, Department of Psychology, Columbia University, 1190 Amsterdam Avenue-MC 5501, New York, NY 10027. Applicants from minorities and women are encouraged. Columbia University is an Affirmative Action/Equal Opportunity Employer. NY2

OHIO

OHIO UNIVERSITY: The Department of Social/Medicine in the College of Osteopathic Medicine invites applications for a funded tenure-line assistant or associate professor appointment for a social scientist beginning December 1st or thereafter, depending upon the availability of the successful candidate. Disciplines open, although the most desired fields (in alphabetical order) are anthropology, communication, epidemiology, psychology, and sociology. Strong background in quantitative and survey research methods preferred. The department is currently composed of eight multi-disciplinary faculty. Position entails teaching undergraduate and graduate medical students using lecture, seminars, videoconference, and on-line teaching methods. Salary and benefits are highly competitive. Qualifications include a Ph.D. or its equivalent. Review of applications will begin on August 15, but applications will be accepted until position filled. Formal letter of application, curriculum vitae, and the names and addresses of three references should be sent to: Norman Gevitz, Ph.D., Professor & Chair, Department of Social Medicine, Ohio University, College of Osteopathic Medicine, 302 Grosvenor Hall, Athens, Ohio 45701. Ohio University is an equal opportunity employer. OH1

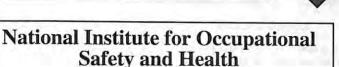
OREGON

The Department of Psychology at LEWIS AND CLARK COL-LEGE invites applicants for a one year visiting professor position for the 1999-2000 academic year. Lewis and Clark College is a private liberal arts college with 1700

undergraduates. The visiting professor will teach one section each of Introductory Psychology, an upper-level course in Physiological Psychology, and a lower-division course in Learning and Motivation, and two sections of Introductory Statistics. Excellent teaching credentials are essential; Ph.D. in Psychology is preferred, but ABDs will also be considered. Applications should be received by July 1, 1999 and include: (1) a Vita; (2) a statement of educational philosophy and teaching experience; (3) evidence of teaching effectiveness; and (4) three letters of recommendation. Send to: Dr. Thomas Schoeneman; Chair, Search Committee; Department of Psychology; Lewis and Clark College; Portland, OR 97219 (e-mail: schoen@lclark.edu). Lewis and Clark College is an Equal Opportunity Employer and encourages the applications of women and minority candidates. OR1

PENNSYLVANIA

TWO 1-3 YEAR POST-DOC-**TORAL FELLOWSHIPS - DE-**PARTMENT OF PSYCHOL-**OGY, UNIVERSITY OF PITTS-**BURGH: Available July-September, 1999 to study the antecedents of childhood antisocial behavior and depression, respectively. The antisocial position involves a 10-year longitudinal study of low-income boys. Observational assessments of family and child adaptation were begun during infancy, for which follow-ups at ages 10-12 are scheduled, including collection of peer data at a study-only camp. The depression position involves a multi-generational follow-up of atrisk children, with an emphasis on understanding the mechanisms underlying emotion regulation, using genetic, biologic, and family indicators. For both positions, responsibilities include assisting the PI in coordinating ongoing data collection and processing (50%), and developing the applicant's research interests (50%). Interested candidates should send a CV, a statement of research interests, and three letters of recommendation to: Daniel Shaw, Department of Psychology, 4015 O'Hara Street, 604 OEH, University of Pittsburgh, Pittsburgh, PA, 15260-0001. The University of Pittsburgh is an Affirmative Action, Equal Opportunity Employer. PA1



Health Communication Research

Staff Fellowships

The Health Communication Research Branch (HCRB), Health Effects Laboratory Division (HELD), National Institute for Occupational Safety and Health (NIOSH), Centers for Disease Control and Prevention (CDC), is seeking candidates to conduct research and scientific inquiry in safety and health communication. Located in a state-of-the-art research facility in Morgantown, WV.

Research emphasis is on developing innovative approaches for preventive occupational health and safety interventions. West Virginia University is located near the NIOSH facility. We are building a new program that presents an interesting professional challenge for people with the motivation to build. This is a research position with a strong emphasis upon publication in appropriate academic and professional sources.

It is required for candidates to possess a Master's or doctoral degree in Psychology or related discipline or equivalent experience. Training and experience in experimental and quantitative approaches is strongly preferred. Background in social and cognitive theories is also desirable. Excellent salary and federal benefits package may be available. Salaries range from \$40,000 to \$67,000 for a 12 month period.

The positions are located in HCRB, NIOSH. The purpose of the Branch is to design, implement, and evaluate health communication research. State-of-the-art technologies and techniques will be systematically analyzed in order to develop and constantly improve and expand the communication strategies of the Division. In addition, HCRB will perform evaluations of the Institute's health communication to assess the impact on health and safety and degree of utilization.

For more information about NIOSH and the CDC, please consult web sites at <u>www.cdc.gov</u> or <u>www.cdc.gov/niosh/</u> <u>homepage.html</u>. If you are interested in applying for these positions contact:

Dr. Steve Booth-Butterfield, Chief Health Communication Research Branch 1095 Willowdale Road, M/S 4050 Morgantown, WV 26505 Voice: (304) 285-6090; Email: zee5@cdc.gov

NIOSH IS AN EQUAL OPPORTUNITY EMPLOYER WV1



RHODE ISLAND

BROWN UNIVERSITY SCHOOL OF MEDICINE DI-**RECTOR: CENTER FOR AL-**COHOL AND ADDICTION STUDIES Professor/Associate Professor of Medical Science. This position is for a tenured senior research scientist to become Director of the University-wide Center for Alcohol and Addiction Studies. Applicants are expected to be eligible for a faculty appointment at the rank of Professor (or Associate Professor) in the Department of Community Health. There is a possibility of appointment to a named chair at Brown University, at the discretion of the Dean of Medicine. Minimum Requirements: The successful candidate must possess a Doctorate with a background in epidemiology, medicine, public health or behavioral medicine. It is expected that the individual will have knowledge of and interest in public policy. Clinical experience is suggested but not essential. This individual is expected to be an experienced teacher with effective track record. The successful candidate will be an established investigator with an international reputation (Professor) and national reputation (Associate Professor) for scholarly achievement in alcohol, tobacco, and other drug addictions, and must have a minimum of five years experience demonstrated in academic administration and program development. Primary responsibilities: The position is tenured and includes all the duties of a regular faculty member and will have research, administrative, and teaching responsibilities as outlined below: Research - Develop and maintain an ongoing program of high quality, externally funded, research. Collaborate with other investigators throughout the University community on research of mutual interest. Administration-Serve as Director of the University's Center for Alcohol and Addiction Studies with overall responsibility for its administrative, fiscal and scientific direction and educational programs; including 30 affiliated faculty and 110 employees in a multidisciplinary setting. Collaborate with chairs of clinical and campus based departments in the recruitment, retention, and development of faculty with special interests in alcohol, tobacco, and other drug addictions. Collaborate in joint academic program development with counterparts in other Clinical and campus-based Departments. Stimulate and develop new interdisciplinary

alcohol, tobacco and other drug programs. Teaching-Teach undergraduate, graduate and medical students under the Department of Community Health. Participate in the direction of the Centers' large interdisciplinary Post-Doctoral Training Program. Responsible for faculty development programs at the Center for Alcohol and Addiction Studies. Applications are expected by September 1, 1999, but may be received thereafter. Screening will begin on that date and continue until a candidate has been selected or the search is closed. A full job description and applications are available from: Chair, Department of Community Health, Box G-A401, Brown University, Providence, RI 02912. Brown University School of Medicine is an EEO/ AA employer and actively solicits applications from women, minorities, and protected persons. RI1

SOUTH CAROLINA

FURMAN UNIVERSITY announces a one-year teaching postdoctoral position for the 1999-2000 academic year. We seek a broadly trained cognitive psychologist to teach three courses (60% of the normal teaching load) and to involve undergraduates in her/his program of research. The probable courses are General Psychology, Experimental/Statistical Methods, and Memory and Cognition. With its demonstrated history of outstanding teaching, well-equipped laboratories in a new building, and excellent computer facilities for teaching and research, the Psychology Department at Furman provides a supportive environment for someone interested in teaching at a liberal arts college where both teaching and scholarship are highly values. You can learn more about our department by visiting: www. furman.edu/~einstein/psy.htm. Send a letter of application, curriculum vitae, and three letters of recommendation to Gil Einstein, Teaching Post-Doctoral Position, Department of Psychology, Furman University, Greenville, SC 29613-1212. Applications received by May 15 will be given first consideration. AA/EOE. SC1

The College of Business and Public Affairs at CLEMSON UNI-VERSITY announces a newly funded professorship for a senior faculty member with a career focus on entrepreneurial leadership. Candidates for the Spiro Professorship may be from any academic discipline (accounting, economics, fi-

PRIFYSGOL CYMRU, BANGOR UNIVERSITY OF WALES, BANGOR School of Psychology

Research Fellowship in Dyslexia

R & A Grade II: £21,815 - £29,048 p.a.

We are seeking to appoint a Research Fellow who will further strengthen our research in the area of dyslexia and work closely with colleagues in our long established and well-known Dyslexia Unit. The School has strong interests in language development, neuropsychology and cognition and has an outstanding record of success in both teaching and research. According to national assessments we rank among the top-rated UK Psychology departments for research (i.e. rated 5A on a scale of 1-5*) and have achieved the highest rating "excellent" for Teaching Quality.

Applicants will be expected to have a Ph.D. in Psychology and relevant research experience in the field of dyslexia. The School has good access to functional imaging facilities and we would particularly welcome applications from people with interests in this approach.

The appointment will be for 3 years in the first instance.

Application forms and further particulars should be obtained by contacting Personnel Services, University of Wales, Bangor, Gwynedd LL57 2DG, Wales, UK, tel. +44 (0) 1248 382926/388132, e.mail. pos020@bangor.ac.uk

Informal enquiries can be made by contacting Mrs Gillian Mair, tel. +44 (0) 1248 383884, e.mail. g.mair@bangor.ac.uk

Please quote reference number 99/30 when applying.

Closing date for applications: Friday 11th June, 1999.

Committed To Equal Opportunities

nance, management, marketing, political science, psychology, sociology, or other). Candidates should demonstrate: A recognized and sustained record of scholarly achievement in entrepreneurship research, including sponsored/funded initiatives; Success in building new academic and outreach programs in entrepreneurship; A strong record of excellence in classroom instruction; Leadership in professional and community organizations that promote entrepreneurial activity; Interest in developing interdisciplinary academic programs and initiatives. The Spiro Professor will be expected to take a leadership role in (1) creating entrepreneurship courses and program initiatives at the MBA level, (2) developing interdisciplinary research initiatives. and (3) enhancing the College's reputation for entrepreneurship research and programs within the academic and business communities. Appointment will be at the senior Associate or Full Professor level within an appropriate home department, subject to approval by the department's Promotion and Tenure Committee. Start date is negotiable but no later than August 15, 2000. Applicants should send a complete resume (education history, teaching, research and other relevant work experience, list of publications and presentations, and the names, addresses and telephone numbers of three references) to: Dean Jerry Trapnell (trapnel@ clemson.edu), Spiro Professorship Search Committee, Clemson University, College of Business and Public Affairs, 165 Sirrine Hall, P.O. Box 341301, Clemson, SC 29634-1301, Review of applicant materials will commence April 1, 1999 and will continue until the position is filled or the search is closed. SC2

UK1

TENNESSEE

EAST TENNESSEE STATE UNIVERSITY, Department of Psychology, Assistant Professor-Cognitive Psychology. Responsibilities: in addition to teaching, the holder of this position will need to maintain an active research program and participate in thesis supervision. Qualifications: Ph.D. in Cognitive Psychology or must have all requirements completed by interview date; duties include teaching general psychology, laboratory courses, and graduate courses in cognitive psychology. Applicants also qualified to teach statistics are VICTORIA UNIVERSITY OF WELLINGTON Te Whare Wananga o te Upoko o te Ika a Maui



FACULTY OF SCIENCE Te Wahanga Putaiao

PROFESSORIAL CHAIR IN COGNITIVE/BEHAVIOURAL PSYCHOLOGY

Ref: SA915

This is a new position created as a result of recent expansion of the School of Psychology. The position is available on a full-time tenured basis, following an initial probationary period.

The successful candidate must have the strongest possible academic credentials - a PhD, an internationally recognised research programme, and an excellent teaching record. In addition, they must possess a proven ability to provide leadership with evidence of staff development and a demonstrated capacity to effectively undertake a senior managerial role in the university setting. The person appointed will be expected to:

- show a willingness and ability to attract research funding
- develop and continue an active research programme
- provide research leadership
- teach and supervise students at both the graduate and undergraduate levels
- undertake a senior managerial and strategic planning role
- represent the School at the Faculty and University-wide level.

Applicants who are able to strengthen an existing area of expertise in the School and are capable of providing research leadership across a variety of research areas are particularly invited to apply. In particular, candidates should have a distinguished research and teaching record in one or more of the following areas: neuropsychology, cognition, memory, and learning.

SENIOR LECTURESHIP/LECTURE-SHIP IN NEUROPSYCHOLOGY

Ref: SA916

The successful candidate for this position will teach in biological bases of behaviour and neuropsychology at the undergraduate and graduate level, and supervise post-graduate research. The preferred candidate will have a PhD and show evidence of successful teaching and research in the area of neuropsychology.

Closing date for applications: 30 June 1999

Please quote the relevant reference number.

A position description and application form are available from the HR Assistant, Faculty of Science, Victoria University of Wellinton, POBox 600 (tel: +64 4 495 5233 ext 8071; email <u>Science-appoint@vuw.ac.nz</u>

In honouring the Treaty of Waitangi, the University welcomes applications from the Tangata Whenua. We also welcome applications from women, Pacific Islands peoples, ethnic minorities and people with disabilities.

NZ1

preferred. Send letter outlining qualifications (including teaching and research interests) curriculum vita and four references to: Search Committee Chair, Department of Psychology, P.O. Box 70,649, East Tennessee State University, Johnson City, TN 37614. Review of applications will begin immediately and will continue until position is filled. AA/EOE. TN1

TEXAS

Post-doctoral Fellowship in Cognitive Neuropsychology at RICE UNIVERSITY. Ph.D. sought for NIH supported research on the role of working memory deficits in language comprehension and production disorders in aphasia. Research experience in psycholinguistics more important than experience in neuropsychology though neuropsychological experience is a plus. Position involves designing behavioral studies for brain-damaged patients and controls, designing functional neuroimaging studies of normal language processing, and supervising laboratory staff and facilities. Salary is \$27,000 per year for two year starting August 1, 1999. Send vita, 3 letters of recommendation and reprints to: Dr. Randi C. Martin, Psychology, Ms-25, Rice University, P.O. Box 1892, Houston, Texas 77251, e-mail rmartin@rice.edu. TX1

VIRGINIA

DIRECTOR, SCIENCE RE-SOURCES STUDIES DIVI-SION, NATIONAL SCIENCE FOUNDATION Arlington, VA 22230 NSF's Directorate for Social, Behavioral and Economic Sciences seeks candidates for the position of Director, Division of Science Resources Studies (SRS). SRS manages statistical surveys and other information collections to provide policy-makers, researchers, and other decision-makers with data and analyses for making informed decisions about the Nation's science, engineering, and technology enterprise. Appointment to this Senior Executive Service position may be on a career or 2- to 3-year limited term basis, with an ES-1 (\$110,351) to ES-4 (\$125,900) salary range.

Alternatively, the incumbent may be assigned under Intergovernmental Personnel Act provisions. Applicants must have a Ph.D. or professional experience in the sciences or engineering, demonstrated knowledge of social science statistical methods and demonstrated leadership ability. The announcements (EP 99-10), with position requirements and application procedures, may be obtained on the NSF Homepage (www.nsf.gov/ home/chart/work.htm#hrm), or by calling the Executive Personnel and Development Branch on (703) 306-0755 (hearing impaired individuals may call TDD (703) 306-0189). Applications must be received by 7/9/1999. NSF is an equal opportunity employer committed to employing a highly qualified staff reflecting the diversity of our nation. VA1

WISCONSIN

Post-doctoral research position in the W.M. Keck Laboratory for Functional Brain Imaging and Health Emotions Research Institute at the UNIVERSITY OF WIS-CONSIN-MADISON. We have one post-doctoral position available for a candidate with interest in using functional magnetic resonance imaging to study both brain and cardiac function associated with emotional processing. Rudimentary knowledge of affective neuroscience and neuroimaging is required. Support for two and possibly three years is available. This position will involve joint mentorship by Richard Davidson and Ned Kalin. Interested candidates please send a letter explaining your research interests, CV and three letters of reference to Richard J. Davidson, , Laboratory for Affective Neuroscience, Department of Psychology, University of Wisconsin, 1202 W. Johnson St., Madison, WI 53706. The University of Wisconsin-Madison is an equal opportunity/affirmative action employer and especially encourages women and minorities to apply. Unless confidentiality is requested in writing, information regarding applicants must be released upon request. Finalists cannot be guaranteed confidentiality. WI1

May/June 1999

SUBJECT AREAS Index

Alcohol/Addiction: FL1, MD1, RI1 Clinical: AL1, KY1, MO1 Clinical (Child): CA4, PA1, NA1 Cognitive: CA1, CA3, IL1, MA2, NY2, SC1, TN1, NZ1 Cognitive Neuroscience: IL3, MD2, MA3, TX1 Communication: NA1, WV1 Cross-Cultural: MI2 Developmental: IL1, MA2 **Educational: MA2** General (includes Director and Chair): CA5, IL2, KY1, MI2, NY1, OR1, SC2, VA1, NZ1 Health: RI1, WV1 Industrial/Organizational: MI2, SC2 Learning: MA2, MO1, NZ1 Neuropsychology: MA3, NZ1, TZ1 Pain Research: MI3 Postdoctoral: CA2, CA3, FL1, MD1, MD2, MA1, MA3, MI1, MI3, PA1, SC1, TX1, WI1 Research/Administration: IL2, UK1 Social: MI2 Social Science: OH1 Country Codes Speech Perception: CA2 NZ...New Zealand

UK...United Kingdom

Printed in the United States of America.

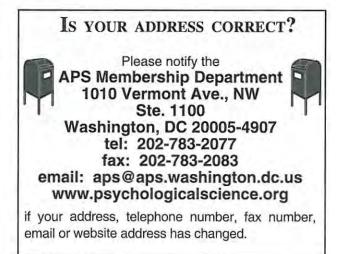


The OBSERVER is printed on recycled paper.



American Psychological Society APS Observer 1010 Vermont Ave, NW, Suite 1100 Washington, DC 20005-4907

Time-sensitive Material



Using the Index

To help readers easily find position openings of direct interest, use the **Subject Areas Index** found at the end of the *APS Employment Bulletin*. The job listings themselves are organized by **geographic area**, but the **subject area** index permits more flexible review of the listings. At the end of each position announcement is a unique three- to four-character alphanumeric code in bold-face type. These codes appear in a listing of **SUBJECT AREAS** at the end of the job listings.

Use the subject list to locate areas of interest and note the codes that follow the subject area of interest. Codes contain twocharacter postal abbreviations of state names (e.g., FL stands for Florida) as their first two characters followed by a sequential number (1 through N) assigned on the basis of the position opening's location in the list of openings for the given state. For example, the tenth job opening listed under the state of Florida would have as its unique code "FL10."

Individual subject areas listed in the SUBJECT AREAS list may be followed by more than one code, indicating that more than one job relates to that specific subject area. Each code following an individual subject area represents one specific position opening. The subject list will vary in content across issues of the *Bulletin*.

Editor's Note: Subject indexing is not intended to be exhaustive. Readers should browse the job listings for a thorough exposure to available openings. Comments regarding indexing are welcome.

