



OBSERVER

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Clinton Nominates Anne Petersen to NSF

New Presence for Psychology at NSF

WASHINGTON, DC—Psychologist and APS Charter Fellow Anne C. Petersen has been nominated by President Clinton to be Deputy Director of the National Science Foundation (NSF), the \$3.2-billion federal agency devoted primarily to funding basic research. The Presidential appointment puts both Petersen and psychology in the top echelon of the federal science establishment.

Petersen's appointment is, in a sense, the latest in a series of significant events



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APS, ISI Announce Electronic Publications

First-of-a-Kind Current Awareness Indexes Will Be Delivered to the Desktop via the Internet

WASHINGTON, DC—APS members will soon have access to a completely new set of electronic publications designed specifically for the individual research psychologist doing literature searches. These publications will span the range of scientific psychology specialties and will be developed cooperatively by APS and the Institute for Scientific Information (ISI)—publisher of *Current Contents* and *Social Science Citation Index*, among other well-known publications.

Several features make these new publications unique. One is that they will be distributed to the individual subscriber's electronic mailbox via Internet. They also will be more timely than other electronic or print sources currently available. ISI's electronic information capturing methods and its reputation for timeliness of secondary reference sources are widely respected. Also, electronic-based publications currently available are not designed or priced for the individual subscriber, and they do not include the literature citations that are such an important aspect of scientific communication.

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<i>Staff Writer</i>	Don Kent

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NIMH Grants to the Behavioral Sciences

Frederick K. Goodwin,
Director
National Institute of Mental Health



Investigators in several fields that are central to the research mission of the National Institute of Mental Health (NIMH) recently have voiced uncertainty and concern over the immediate prospects for new/competing RO-1 grant support from the Institute. Some queries reflect a degree of confusion about terms used to assess the "fundability" of applications; others seek clarification of NIMH priorities with respect to both the balance of our portfolio and the mechanisms used to support research. I appreciate having this opportunity to describe key dynamics underlying our current funding pattern and to ensure that concerns, however understandable, are proportionate to reality.

The NIMH research budget experienced unprecedented growth during much of the past decade. Increases of 10 to 15 percent annually in the late 1980s contributed to an 85 percent increase in inflation-adjusted dollars between 1982 and 1994, reflecting a widely shared perception about the importance of our research. The gains benefitted all fields and disciplines supported by NIMH, including those that comprise the basic behavioral sciences—research aimed at better understanding the development and emergence of cognition, personality, and emotion; the mechanisms and processes involved in interpersonal interaction; the impact of the social environment in shaping adaptive and maladaptive behavior; and related issues. The capacity that exists today for further productive research in this vital area of inquiry is built largely on a foundation of NIMH support over the past four-plus decades.

Climate Change

However, over the past two years, the funding climate has changed, and we've experienced a dramatic reduction in the rate of increase. The current trend began in fiscal 1993, when serious efforts by Congress and the Administration to address the deficit (including strict caps on the Appropriations Committees) restricted all domestic discretionary spending, including biomedical and behavioral research.

For NIMH, continuing obligations undertaken during the rapid expansion of the late 1980s makes the ongoing constraints all the more painful. Thus, in 1993, in spite of a modest budget increase (which was actually above the NIH average), NIMH's overall success rate (the percentage of grants paid over grants reviewed) dropped from 28 percent in 1992 to 19 percent, and support available for new and competing grants declined by about one-fifth.

This year (fiscal 1994), gains which might have been expected—given the 5.2 percent budget increase and an overall reduction in continuations—are offset by: a still high load of non-competing renewals in our basic science program; a relatively high proportion of MERIT awards to senior investigators in the basic arena; and, most especially, our commitment to expand mental health services research from 12 percent of our budget to the 15 percent targeted this year by Congress. Our success in attaining this target in a single year requires about 80 percent of this year's new funds. We recognize that solid services research data are important to making the case for the inclusion of mental illness treatment in health care reform, and we remain firmly committed to maintaining and strengthening our services research portfolio. With the target achieved, further expansion of services research will be pursued at a pace proportionate to future growth in the overall Institute budget. In other words, starting this October, budget increases can be distributed more evenly.

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Which Way to Equality for Women?

New NAS Report Documents Female Scientist Participation in Industry: More Questions than Answers for Psychology

WASHINGTON, DC—The opportunity to earn a good living is an important measure of an individual's autonomy and full participation in society. Why do women enjoy less of this opportunity than men? Homemaking and childcare responsibilities can be shared with husbands, and there are many single women for whom such sharing is irrelevant. The number of jobs that require a man's greater size and strength is declining. Education for women has become the rule, rather than the exception.

Nevertheless, unequal access to jobs remains. And for women scientists, the problem is just as real, according to a new National Academy of Science (NAS) report, *Women Scientists and Engineers Employed in Industry: Why So Few?* To wit, 16% of the science and engineering workers in all settings in this country are female, while women comprise only about 12% of the scientific and engineering labor force in industry. Though this is due in part to self-selection, another factor is attrition, according to the report which was released in January by the National Research Council's (NRC) Committee on Women in Science and Engineering (CWSE) in the Office of Scientific and Engineering Personnel.*

The report was based in part on a January 1993 conference of 150 women scientists, engineers, and human resource staff in industry. Most of the participants came from engineering or physical science settings.

Poor Climate

One of the report's hypotheses is that industry is particularly male-oriented and provides a worse work environment for females than other sectors of the economy (government or academe, for example). Although based on a conference attended mostly by women in engineering and sciences other than behavioral science, the report examines the statistics for behavioral, social and life sciences as well.

How do women psychologists fare in industry, and how do they characterize that work environment? To help find an answer, the *Observer* interviewed experts in the area of gender and work and consulted employment statistics. In short, the answer is: There is plenty of room for research on these questions.

Most of our sources thought it possible that psychology might be the field with the most overall gender equality, but none believes that real equality of employment has been approached in

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Basic Research in Emotion

On April 29, 1994, the National Institute of Mental Health (NIMH), National Institute on Aging (NIA), and National Institute of Child Health and Human Development (NICHD) issued Program Announcement (PA) MH94-059, "Basic Research in Emotion." Under this announcement, NIMH, NIA, and NICHD invite research grant applications to expand basic research on the processes and mechanisms involved in the experience and expression of emotion.

Recent years have shown the rapid expansion of concepts and methods for studying emotion in all of its aspects. Outline in the announcement are current needs that build on these advances and that constitute critical components of a comprehensive basic research strategy, with the ultimate aim of fostering mental health and the understanding of human development. These needs include a fuller description of the basic mechanisms of emotions and moods and the evolution of individual differences in emotional experience and expression. They include developmental approaches that incorporate examination of both phylogenetic and ontogenetic processes and that expand their focus to cover the lifespan. They call for new and increasingly precise methods and techniques for assessing emotion and its subjective, expressive, autonomic, and neural components. Finally, they explicitly consider both genetic and experiential factors in shaping emotional processes, and take seriously the complex interactions and interrelationships that exist among social, psychological, and biological processes.

In order to encourage increased research, applications are requested under the following mechanisms: research project grant (R01), small grant (R03, NIMH only), and FIRST award (R29). Eligibility and requirements for different funding mechanisms vary. Applicants are advised to contact NIMH, NIA, or NICHD program staff listed below for the complete announcement, additional information, and specific application procedures:

Lynne C. Huffman
Division of Neuroscience and Behavioral Science
National Institute of Mental Health
5600 Fishers Lane, Room 11C-10
Rockville, MD 20857
Tel: 301-443-3942
Fax: 301-443-4822
Email: L3H@NIHCU.BITNET

Ronald P. Abeles
Behavioral and Social Research Program
National Institute on Aging
Gateway Building, Room 533
7201 Wisconsin Avenue
Bethesda, MD 20892
Tel: 301-496-3136
Fax: 302-402-0051
Email: RAS@NICHU.BITNET

Sarah L. Friedman
Human Learning and Behavior Branch
National Institute of Child Health and Human Development
9000 Rockville Pike, Building 6100, Room 4B05
Bethesda, MD 20892
Tel: 301-496-6591
Fax: 301-402-2085
Email: SF2@NIHCU.BITNET

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Can we really afford not to take full advantage of the abilities and expertise of all members of our society?

FAYE CROSBY
SMITH COLLEGE



Crosby

any field or in any sector of the economy. Nor is there a single villain. Several interviewees used the phrase “cumulative disadvantages” to describe the barrage of discouraging attitudes and practices women face throughout their lives—from family, school, employers and coworkers, as well as their own internalized attitudes.

It all conspires to reduce their pay and their participation in economic life. Furthermore, if and when women do enter a field in large numbers, they usually face the prospect of sex segregation according to specific job, or they face the “feminization” of the field, wherein status and pay reductions ensue as men exit the field and greater proportions of the labor force in that field are women.

Possible Answers

To the question, “Why so few?”, four answers are proposed: (1) Few women pursue careers in science and engineering; (2) Women who do go into science tend to go into disciplines in which there are few industrial jobs, namely behavioral, life and social sciences; (3) Women are less likely than men to seek industrial jobs; and (4) Women are more likely than men to exit industrial employment. To what extent do these four answers apply to psychology?

The number of women entering science and engineering has been rising steadily for 30 years, but it is still less than the number of men. One reason is that many believe that females are not as good at science and math as males. Therefore, says Smith College psychologist Faye Crosby, many parents will suggest to a daughter that she not overwork herself with advanced math in the 11th and 12th grades, for example. But Crosby (a co-

author with Susan Clayton of the 1992 book *Justice, Gender and Affirmative Action*), points to a study by Jacquelynne Eccles, University of Michigan, showing that if you correct for the effect of girls’ not taking those courses, the much-publicized test score differences between boys and girls disappear! The myth, nonetheless, continues to perpetuate itself.

One wonders how many of such “differences” are similarly based on self-fulfilling prophecies, asks Crosby.

The Psychological Difference

However, the rule that women constitute a minority of scientists is no longer true in psychology. Demographic researcher Jessica Kohout (American Psychological Association) reports that a 1991 survey of doctoral degree recipients, for example, shows the supply of doctoral level psychologists has been over 50% female since the mid 1980s. In developmental and educational psychology, women exceeded 50% of the graduates in the early 1980s, and in clinical and counselling, the switch occurred slightly later. By 1992, almost every subfield of psychology was dominated by women. Published in the National Science Foundation’s (NSF) *Selected Data on Science and Engineering Doctorate Awards, 1992* (NSF 93-315) these numbers also show that 59% of the psychology doctorates awarded in 1992 (out of a total of 3,252) were to women, up from 45% in 1982.

No other major branch of science equalled psychology in the percentage of females, but several small categories were majority-female, including nutritional science (96 out of 133 degrees, or 72%) which has been led by women for more than a decade. In several areas of biological and social science, about 40 to 50% of doctoral degrees go to females; these areas include human and animal genetics, immunology, anthropology, and linguistics.

Women Psychologists in Industry And Confounding Factors

Women are indeed concentrated in behavioral, life, and social sciences, and data on recent hires at all educational levels show that those areas are less in demand in industry than in other sectors. Given that industry hires relatively few psychologists, does industry hire its share of women psychologists? No, not according to the National Academy’s data on new hires for 1990.

NSF data on total full time employment of doctoral psychologists do seem, at first glance, to indicate that the proportion of

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Putting Psychology in *Science*: AAAS Editor Speaks His Mind

When the brain malfunctions, some nonscientists tend to ascribe the cause to bad parenting, a poor environment, or evil spirits, whereas a scientist tends to ascribe it to a malfunction in the chemistry of the brain. [Science, Oct. 29, 1993]

WASHINGTON, DC—Those of you who occasionally read something other than the *Observer* may recall the above sentence from an editorial last fall in *Science* magazine titled “Frontiers in Neuroscience.” The piece described some recent developments in brain research. That was a good thing. The not-so-good thing was that it also seemed to convey a biased view of the role of behavioral research in understanding and solving problems of the brain.

We received a number of complaints about the piece from APS members who naturally objected both to the characterization as “unscientific” anything that is non-biological, and to the notion that the only solutions to mental illness will come from biological research. Many expressed the harsh view that this is just more evidence of a narrowness in *Science*’s editorial policies, with psychological, behavioral, and social science research being increasingly outside of the publication’s scope of interest. We received copies of letters that APS members sent to *Science*. We followed with our own letter to *Science*.

In response to our letter, we got a call from long-time *Science* editor Daniel E. Koshland, Jr., who told us that in fact, he is interested in improving the magazine’s relationship with behavioral science, especially by encouraging psychologists to submit more articles, and he invited us to work with him on this issue. Koshland, whose research interests span biology and chemistry, divides his time between the journal and the University of California-Berkeley, where he is professor of biochemistry and molecular biology.

We worked with Koshland to develop a list of APS members who we think ought

to be considered for the *Science* editorial board. This *Observer* story is intended to inform readers on a first-hand basis of Koshland’s editorial philosophy related to *Science*.

Koshland explained *Science* editorial policies and gave us his views on psychology in a conversation with APS Executive Director Alan Kraut at the Washington headquarters of the American Association for the Advancement of Science (AAAS).

Here are some of Koshland’s thoughts:

On the perception that *Science* doesn’t publish psychological science and that psychologists don’t read the journal: I think the perception of a few people is not correct. I can name a number of psychologists and social scientists who say they would love to have a paper in *Science* because it gets enormous response—it gets picked up by magazines and newspapers—and they get an enormous number of reprint requests....

We do have articles we consider landmark articles in a field, whether they appeal to people outside it or not. That may be a category that doesn’t get a lot of reprint requests. But most of the others get a lot.

On the kind of articles *Science* publishes: We want a certain quality of article, but the article that appeals across



APS Executive Director, Alan Kraut (left), and *Science* Editor, Daniel Koshland discuss AAAS editorial policy and philosophy.

more than one field tends to have a better chance than an article that is specialized. We feel our journal is interdisciplinary and that’s one of its unique characteristics. Of course, modern specialty journals are not very specialized anymore. Psychology crosses an enormous range, biology an enormous range....

Population explosions, mental illness, other things that span several disciplines may get a bigger response compared to a very narrow article in psychology. That does not mean the psychology article is a bad article; it means it is more narrow and does not get the response, which can be true of somebody in virology as well. But we accept an article if it is a brilliant breakthrough in a field, even when the article is very specialized....

Let’s say you discover the positron or something like that. None of the chemists

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or biologists understand one bit about it, but everybody in physics says this is one of the landmark discoveries and is going to get a Nobel Prize if we publish it.

At the other extreme you have a new vaccine for AIDS on a slightly different principle, not what was done before, and it's 95% effective while the previous one was 85%. But...AIDS is such a public health [issue] and it is of wide interest that it would get in too. The novelty level is much lower, but a lot of people would be interested. Most articles are somewhere in between.

On psychology in particular: My reaction about social science is that there is probably a greater need here than in any other field, in the sense that good social science is extremely important and extremely tough. I'm actually in the area of behavior and have published a book that has "behavior" in the title. But it is bacterial behavior—now we are doing long-term memory in rat brains. Anyway, I am really very favorable toward social science despite my image. But I demand that it be good science....

On rejection rates: We are rejecting almost the same percentages—the statistics are very much level—across fields. If anything, the statistically under-represented people are given favorable treatment relative to the others.... But this still doesn't mean we are taking bad articles. I could easily fill up the magazine with enough social science or physical science, which we work very hard to get more of, but I want it to be the same quality as other areas. Then, when the social science article appears in *Science*, people think 'Oh, it is really one of the very good articles, it's a smash if it got in' rather than 'Well, they're taking the things that the physical or psychological reviews rejected....'

On pain and gain: There is a self-selection principle at work. People do not send anything to *Science* unless they consider it one of their best. For those submitted, the selection rate is one out of eight, or 12%. And knowing it's one out

of eight of the very best articles, that's painful. We know we are rejecting articles right and left that are excellent and that will have no problem being published in more specialized journals. We just don't have the pages....

We are going to grow a little bit [number of pages]. About 30% is my target for the next five years. But I feel that *Science* and *Nature* perform a function by being smaller journals. That's unlike some journals that decide on a certain quality article and then expand their pages to accommodate that. They become this thick, as you know, and they are publishing twice a month even then. But we don't have that luxury...we have 155,000 members.

On whether the behavioral and social sciences are under-represented in comparison to other fields: I would say probably. But let me say one or two other things about numbers: Because psychologists argued this some years ago, I did my homework. What I found was that if you talk about under-representation in terms of funding, it was clearly the physical sciences (i.e., physicists, chemists, etc.) [that were under-represented] because the amount of funding they got was enormous. But the physical sciences have big physics projects and every five years they come out with a big article with 376 names on it, or it's defense research which is classified so they don't send it. The biologists, who are very well funded, are all little cottage industries. They are individuals with \$100,000 grants or \$50,000 grants who have got to get them renewed. So they are very interested in publishing. Plus, their work comes out in little pieces....

Another reason the biological sciences have been very powerful in both in *Science* and *Nature* is probably that originally they had no other journal.... If you look at the number of journals in the biological sciences, new journals created, it's enormous.... There is a tremendous amount of money in it. There is [the National Institutes of] Health and so forth. So if you look at the percentage of science being done and the way [those sciences] publish, there is not any pro-biology bias in *Nature* and *Science*. And most of the biological scientists within the field will say it is much more competitive in the

biological sciences and that we are favoring the social sciences.

On the *Science* editorial review process: A psychology article is reviewed by psychologists, molecular biology articles are reviewed by molecular biologists, and so on. But the board of reviewing editors makes the first cut. They ask 'Is it likely to be published?' And then we sent it out to the specialists.... The ones we send out for review have a [one in two or one in three] chance of getting into the journal.... We screen the routine things that are confirmatory—they have now done in the rat what was done in the mouse—and even if it is very well done, if it just isn't that novel, we say that's appropriate for a specialty journal....

We encourage authors to give us the names of two or three reviewers they think would be appropriate for their articles, but we may or may not take them...because the board of reviewers usually suggests some good reviewers. However, we also encourage authors to indicate anybody they *don't* want to review it. And we are religious about that. We also try to avoid sending it to anybody we know is competing with the same thing, and so forth....

[A paper was submitted that used brain imaging to confirm that earlier conclusions about a patient's loss of brain function had been correct.] There was nothing really new in this imaging, but I felt it was historically interesting and was sufficiently corroborative of a large amount of data that had been collected before imaging technology existed. So I made the judgment to publish.... But in most cases, we accept [the decision] when reviewers say this is not up to *Science*—it is for a specialty journal, and that's as true of psychology as it is for molecular biology.

On the *Science* Board of Reviewing Editors: The reviewers are selected based on three criteria. They have to be very prominent scientists, first of all. They have to be considered fair, so people feel that they are going to get a good shake. And they have to have an interest in breadth, in enough of a variety of areas because we never get that many [submissions] in a given specialty.

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Spotlight on Research

On the Biology of Temperament Development

Common threads emerge from diverse behavioral research on personality determinants

SAN FRANCISCO, CA, FEBRUARY 19— Four prominent APS psychologists presented their latest findings on the mechanics and genetics by which biochemistry influences personality, here at the 160th annual meeting of the American Association for the Advancement of Science (AAAS). Though each is pursuing his/her own larger conceptual vision, the data emerging from their very diverse work is clearly converging on the same point. “There is remarkable agreement among us,” said Harvard University’s Jerome Kagan, one of the speakers.

Collectively, their work strengthens and refines the notion of an inborn physiological basis for temperamental traits such as emotional ease versus anxiousness, social ease versus shyness, reticence, versus adventurousness, expressiveness versus guardedness. Moreover, their results point to what the central physiological mechanism might be. In the words of a speculating Kagan, “We all have the same neurotransmitters, but each of us has a slightly different mix. That is what determines the firing patterns of the hippocampus, the amygdala, and the anterior cingulate.” And, he adds, that’s what makes the difference between the temperament of a Bill Clinton and a T.S. Eliot, for example.

Surprise Findings

Further, the experts concurred that dysphoric temperamental traits, such as fearfulness and sadness, have a stronger genetic basis than do more “positive” traits. “But the major unexpected finding from behavior genetic studies has not been that genetic variation influences traits; rather, it has been that shared-family rearing effects are so minimal,” said David Rowe of the School of Family & Consumer Re-

sources at the University of Arizona. “It may take some time for social science to absorb fully this new knowledge.”

Central Activity

Separate studies of Kagan and of Nathan Fox, professor of human development at the University of Maryland and the organizer of the AAAS session, provide evidence for the limbic system as the seat of temperament. Fox’s path of speculation leads to the frontal lobe, Kagan’s to the amygdala.

In Fox’s studies, infants who had been rated by overt behavioral criteria as being introverts, extroverts, or halfway in between, later had electroencephalographic (EEG) recordings which detected a characteristic difference according to temperament type—but only in the frontal electrodes. Specifically, electrical activation in the frontal area was relatively greater on the left side in extroverted babies, greater on the right side in introverts, and the same on both sides in the in-betweens.

Likening an EEG recording to sticking a microphone in a football stadium—you can’t tell what section the cheering is coming from, only that it’s there—Fox noted that the yield is merely a summation of many brain activities as represented by voltage from the scalp. Nonetheless, he views the findings, “which we have been reporting over the last few years, as suggesting that the frontal area is involved not just in complex cognition but in emotion too.” He concludes that “there appears to be a dynamic balance in activation between the left and right anterior regions that [is] associated with approach versus withdrawal [extroversion versus introversion].” At the same time, he cautions that the EEG observations have not been pursued in subjects over two years old and may not show similar patterns in older subjects.

Sympathetic Activation

Kagan found a parallel physiological dichotomy that likewise correlated with temperament category: a relative difference in sympathetic nervous system arousal between the left and right sides of the body. His extroverted children had a greater baseline tone in the left sympathetic tree than the right; for the introverted children the opposite pattern emerged.



Kagan

Kagan inferred the relative difference in sympathetic tone by taking the temperature of each hand (using a thermographic scanner). The cooler hand signalled decreased blood flow, the result of autonomic vascular constriction (with no confounding by parasympathetic opposition because the arteriovenous anastomoses of the fingers are purely sympathetically activated).

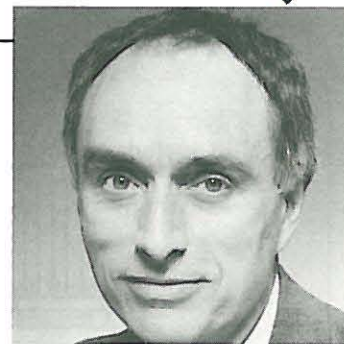
The proportion of subjects leading with their left was the same for Kagan’s cooler-handedness as for Fox’s “hotter” EEG readout: a ratio of 2 to 1.

The Reactionary Right

The amygdala, well established in animals as the controller of fearfulness versus aggressiveness, has among its important projections one to the sympathetic nervous system, Kagan notes. As well, there is a large literature to the effect that the right hemisphere, as a whole, participates more in

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Member Profile



Lloyd Morrisett: Psychology Offers More than One Way to Teach

Founder of Children's Television Workshop discusses use of technology to educate public on national policy issues

"I didn't find teaching in the university as rewarding as I had hoped," says APS member Lloyd N. Morrisett, looking back to the start his career. With his Yale PhD (in experimental psychology) in hand in 1956, Morrisett had reached this conclusion after merely two years of teaching at the University of California-Berkeley.

"I guess academic life didn't hold the same fascination for someone like me who had grown up within it as it might have had for somebody who had not been part of it. I grew up in an academic family—my father was a professor at UCLA. So I took a job with the Social Science Research Council in New York City, thinking that would give me a year or two to look around and open my eyes to other possibilities. I had been there less than a year when I was offered a job by social psychologist John Gardner at the Carnegie Foundation. Gardner was president then. [Later, Gardner would become US Secretary of Health, Education and Welfare and would found Common Cause, the consumer advocacy organization.] "I took the job and I absolutely loved it."

Teaching Through Communication

Morrisett went on to become a foundation executive and one of the nation's leading authorities on the use of communication technology to enhance people's lives. He is now president of the board of directors of Children's Television Workshop, which he co-founded with Joan Ganz Cooney in 1968.

Morrisett has also been president of the board of trustees of the Rand Corporation since 1986. He and the other members review research studies at multi-day briefings twice a year. Morrisett also discusses policy issues with Rand management in executive committee meetings four or five times a year. It's no small task. The Rand Corporation has a staff of about 700 professionals and generates about \$100 million in revenue each year from research it performs in many areas of domestic public policy and national security issues.

Morrisett has been a Rand board member since 1973. But his main job for more than 25 years has been as president of the John & Mary R. Markle Foundation. It has an endowment of about \$110 million and makes grants of about \$3.5 million a year to educational and life-enhancing communications projects and studies. One of its long-term projects is a SeniorNet telecommunications service for the growing number of computer-literate seniors. Another is a plan for worldwide, universal e-mail. Another is a range of interactive electronic town meeting models "that produce deliberation rather than simply off-the-cuff polling," according to Morrisett.

Communication Solutions And Healthy Reform

The Markle Foundation is always looking for ways to bridge the communications gap between complicated issues and a public that has neither the time nor inclination to absorb great volumes of information related to national policy issues. Tackling health care reform most recently, Markle has funded the development of a computer simulation game, *SimHealth*, that puts the player in charge of "reforming the United States health care system," with many of the attendant economic and social choices, dilemmas, and trade-offs. It "offers a risk-free way of showing what happens when you enter uncharted waters in social policy," said Morrisett.

SimHealth is "software that turns you into Hillary Rodham Clinton," the *Washing-*

ton Post quipped. Morrisett believes psychologists, teachers, and students in schools of public health and medicine will be interested in the game. [The game requires at least a 386 PC with an SVGA or VGA (supervideographics adaptor or videographics adaptor) and is available from SimHealth (see below).] Morrisett said, "Anybody who uses it gets a concrete feeling for the trade-offs that must be made, whether they can be made successfully, and how they impact on the values you are trying to maximize." The player must declare at the start of the game what he/she values most about health care reform and must build a new system around those values or be booted out of office.

The broad dimensions of choice that *SimHealth* labels are "liberty versus equality" and "community versus efficiency." Each policy choice sets off a stream of economic consequences for individuals, businesses, doctors, hospitals, insurers, and government budgets.

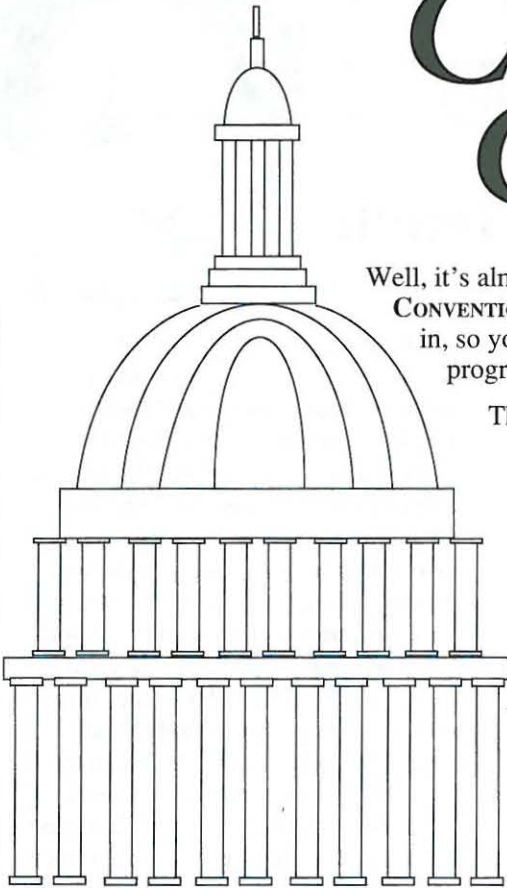
Electronic Technology And Early Education

Morrisett's early interest in information technologies ripened at Yale under the tutelage of Carl Hovland, Irving Janis, and others. His interest in the use of electronics in education found fertile ground when he became vice president of the Carnegie Foundation for the Advancement of Teaching in 1965. One of his responsibilities was to guide Carnegie's efforts to find ways of enriching the education of young children.

"There was a lot of discussion of the gap between more culturally deprived children and those who came from better environments," he said in a recent

SEE MORRISSETT ON PAGE 17

COUNTDOWN TO CONVENTION...



Well, it's almost time to pack your bags and head for Washington for the **6TH APS ANNUAL CONVENTION**, June 30-July 3, at the Sheraton Washington Hotel. Registrations are pouring in, so you know that you'll be in good company! Here's just a glimpse of the exciting program and other convention features that await you.

The APS Program Committee and President have outdone themselves in identifying and inviting the leaders of our discipline to participate in this memorable meeting. The list of **invited speakers** reads like a *Who's Who* of scientific psychology—John Bargh, Urie Bronfenbrenner, Robyn Dawes, Howard Eichenbaum, Edna Foa, Howard Gardner, Lynn Hasher, Ray Hyman, P.R. Jeanneret, Ruth Kanfer, Daniel Klein, Robert Levenson, Howard Leventhal, Steven Maier, Steven Pinker, Timothy Salthouse, Shepard Siegel, Patricia Cain Smith, William Smotherman, Philip Tetlock, Sigmund Tobias, and Elaine Walker. **Invited symposia** cover a broad range of topics, including the neuropsychology of aging, I/O psychology, ethical issues facing teachers, small groups research, self-modeling, performance assessments, and higher order thinking in the classroom. Two Human Capital Initiative efforts will be the focus of additional invited symposia, one on “The Changing Nature of Work” and the other on “Vitality for Life.” The Presidential Symposium, organized by Marilyn Brewer, is titled “The Social Bases of Cognition,” and will feature Robert Abelson, James Greeno, E. Tory Higgins, and John Kihlstrom.

But, of course, the program is largely a creation of the enthusiastic APS membership. The following page lists the accepted **member submissions**—Addresses with Commentators, Multispecialty Symposia, and Symposia. The *Convention Program*, which will be mailed to APS members and convention registrants in late May, will include all 700+ cutting-edge **poster presentations**, including listings of the special **Federal Funding Poster Session** and the **Psi Chi Poster Session**.

And, don't forget the other convention activities, like the jam-packed **Exhibit Hall**, featuring the latest in psychological literature, software tools, and laboratory equipment, a one-day **Film Festival**, the **Job Bank**, and, of course, opportunities to socialize at the receptions. After the meeting is over, treat yourself and your family to a fun-filled Fourth of July holiday in the great city of Washington, DC. Watch the fireworks on the Mall, take a trolley tour, cruise the Potomac, stroll through the National Zoo, or visit any one of the world-famous Smithsonian museums!

Related Organizations Schedule Satellite Meetings at APS Convention

In recognition of their members' participation as presenters and attendees at our upcoming Washington meeting, a number of psychology-oriented and related organizations have accepted APS's invitation to hold mini-conventions, poster sessions, workshops, business meetings, and social events in conjunction with the 1994 APS Convention. Satellite meetings (with the exception of closed business meetings) are open to all interested individuals, often at no additional cost.

Specific scheduling information and program descriptions will be published in the *APS Convention Program*, or you may contact the APS Convention Department or the following societies themselves for more information:

- ◆ American Association of Applied & Preventive Psychology
- ◆ National Institute of Mental Health (see p. 12 for details)
- ◆ Psi Beta, the National Honor Society in Psychology for Community and Junior Colleges
- ◆ Psi Chi, the National Honor Society in Psychology
- ◆ Society for Personality and Social Psychology, Inc. (see p. 12 for details)
- ◆ Society for Text and Discourse

Save \$

MAY 29 is the deadline for taking advantage of advance registration rates.

Time running out? Register by fax (202-783-2083), when charging to your MasterCard or VISA charge account.



SPSP 4th Annual Meeting to Precede APS Convention

The Society for Personality and Social Psychology (SPSP), an organization of approximately 3,500 personality and social psychologists, will hold its fourth annual meeting at the Sheraton Washington Hotel on June 29-30, immediately preceding the APS Convention. The previous conventions have been enormously successful, with high attendance and quality presentations, and the program for this year's convention promises to continue in this tradition.

Acting as a supplement to more general psychology meetings, the SPSP annual convention allows its members concentrated interaction with other personality and social psychologists. For both graduate students and more established psychologists, the small scale of the convention and social hours provide a unique opportunity to discuss research and to learn about some of the most recent developments in the field.

This year's convention theme, chosen by SPSP President Susan Fiske and President-elect John Cacioppo, is "Two-Mode Models in Personality and Social Psychology." The convention will begin at 7:30PM on Wednesday, June 29, with a keynote address by Marilyn Brewer. A reception will follow her address from 8:30 to 10PM. On Thursday, June 30, there will be three symposia, from 9AM to 3:40PM. In each session, speakers will present a *short* discussion of their research, leaving ample time at the end of the session for discussion among the panelists and audience members. The first symposium (9-10:40AM), on two-mode models in attitude research, features Mahzarin Banaji, Shelly Chaiken, Russell Fazio, and Richard Petty. The second session (11AM-12:40PM) includes John Bargh, Peter Gollwitzer, Mark Snyder, and Arie Kruglanski, who will discuss two-mode models in personality and social psychology. The final symposium (2-3:40PM) highlights social cognition research, with speakers Janet Ruscher, Eliot Smith, Phillip Tetlock, and Yaacov Trope.

All those attending the APS Convention (both SPSP members and nonmembers) are welcome to attend the SPSP meeting. There is no extra registration fee required. For more information, please contact Julie K. Norem, Chair of the Convention Committee, SPSP, Department of Psychology, Wellesley College, Wellesley, MA 02181; Email: jnorem@lucy.wellesley.edu.

◆ SPECIAL APS CONVENTION ANNOUNCEMENT ◆

BREAKFAST WORKSHOP: NIMH Grant Support for Junior Investigators

Friday, July 1, 1994 ◆ 7:15-8:45AM
Colorado Room, Sheraton Washington Hotel

The National Institute of Mental Health maintains active programs of support for basic and applied research in psychology. Support is available in the form of grants for research, training, and career development, and several types of grants are specifically directed toward junior investigators. The workshop is a chance to learn about these opportunities and to obtain practical information that will maximize chances of funding.

- How to obtain presubmission consultation from NIMH staff
- How to direct your proposal to the most appropriate funding component within NIMH
- The types of grants that are available
- Steps in the application process
- Criteria used in scientific review
- Funding considerations and priorities

Presenters:

Stephen H. Koslow, PhD, Director, Division of Neuroscience and Behavioral Science, NIMH
Hilleary D. Everist, PhD, Deputy Director, Division of Neuroscience and Behavioral Science, NIMH
Mary Ellen Oliveri, PhD, Chief, Behavioral, Cognitive, and Social Processes Research Branch, DNBS, NIMH
Rodney R. Cocking, PhD, Chief, Fundamental Cognitive Mechanisms Program, BCSPRB, DNBS, NIMH
Della M. Hann, PhD, Chief, Interpersonal and Family Processes Program, BCSPRB, DNBS, NIMH
Lynne C. Huffman, MD, Chief, Personality and Emotion Program, BCSPRB, DNBS, NIMH
Howard S. Kurtzman, PhD, Chief, Advanced Mental Processes Program, BCSPRB, DNBS, NIMH
Edison J. Trickett, PhD, Special Assistant on Sociocultural Processes, BCSPRB, DNBS, NIMH

This workshop is intended for investigators and students who have not had previous NIMH grant support. Since space is limited, **advance reservations are required**. You *must* be preregistered for the 6th APS Annual Convention in order to reserve a place at this breakfast workshop. Reservations will be accepted via telephone on a *first come, first served* basis, and a waiting list will be maintained. If you are interested in attending this event, please call Anne Kwiatkowski at the APS Office (202-783-2077).

PUBLICATIONS FROM PAGE 1

Further, subscribers will receive the kind of bibliographic information and powerful information management capabilities for which ISI is known: reference citations from ISI's database of 8,000 journals, books, and conference proceedings—perhaps the world's largest compilation of scientific literature, including associated abstracts, author addresses, and publisher addresses. ISI's products also combine search-and-retrieval and organizational software that permit desktop reference management.

History

With an eye toward developing useful scientific publications, ISI and APS began more than a year ago to determine members' information needs and their level of integration with electronic information networks. It started with a survey of APS members. With scientific communication as a cornerstone of APS's mission, the APS Board felt that the ISI-coordinated survey presented an excellent opportunity to learn more about the information gaps in scientific psychology.

With the Board's endorsement in hand, ISI conducted two focus groups last winter and a telephone survey of 500 members last spring, and the data were analyzed and then discussed by a working group of interested APS members at the 1993 APS Convention in Chicago. Since that time, the data have been further analyzed and reviewed by APS representatives and the APS Publications Committee. APS and ISI reached an agreement to proceed in April.

Two Categories of Publications

APS subscribers will be able to select from two categories of publications. One will be customized for the subscriber's personal interests and one will cover broad topical areas.

The customized publication, "*Personal Searcher*," will be electronically

tailored by the individual subscriber. The topically organized publications, on the other hand, will be organized around five subject-specific publications (Biological/Cognitive/Experimental; Clinical/Treatment; Developmental/Educational; Industrial/Organizational/Ergonomics; and Social/Personality) and will be produced under the rubric "*Focus On*," a popular ISI electronic publication format.

An Exclusive

APS members will have exclusive rights to subscribe to either of the publications for the first year (beginning July 1) of the contract with ISI. Also, because of the ground-breaking nature of these publications, APS and ISI will conduct an email survey to understand APS members' utilization of the Internet. Upon completion of the survey, we will publish major findings in the *Observer*.

Discounts for APS Members

APS members will receive an exclusive 25% discount off the list price of each of these publications, even after the publications are made available to non-APS members in July 1995. *Focus On* publications will be available to APS members for \$169 (list price is \$225), and *Personal Searcher* will be sold for \$221 (list price is \$295).

"There simply is no other publication of this type available now," said Lee Herring, APS's Director of Communications. "This is a completely unique publication concept, and APS members will be able to subscribe to the new publications beginning this summer."

Discussing his long-term interest in developing such publications for APS members, Herring said that these "APS-ISI publications will help APS fulfill its important scientific

communication function. As APS's first Director of Communications, I expressed my expectation in the May 1990 *Observer* that APS would one day be able to offer a

sophisticated reference publication of this sort for use by the individual researcher. The dream is coming to pass much sooner than I had thought possible." Wanting APS to be an innovator in scientific communication, Herring continues to maintain that given the proliferation of scientific information, the typical individual researcher

requires an *intelligent* system to extract the "signal from the noise more efficiently than current [electronic database] systems allow."

... To Boldly Go Where No One Has Gone Before ...

APS Publications Committee Chair Robert Krauss said, "For most APS members, the scientific literature is a critical resource to which we turn frequently, but some of us find ourselves overwhelmed trying to keep respectably abreast of several burgeoning and increasingly specialized areas. The information products under development by APS and ISI are intended both to increase the efficiency with which we utilize the literatures of interest to us, while broadening the universe of the literature available to us."

Commenting on this latest addition to the APS publications portfolio, APS President Marilyn Brewer said, "We have been very pleased with our association with ISI in developing these trail-blazing publications. The release of the *Focus On* products and the availability of a personalized current awareness service will extend APS's services into a new area in the world of information dissemination."

Intelligence and Mechanics

ISI has been a leader in information science technology application in science



Herring



FROM PREVIOUS PAGE

and engineering information dissemination since the early 1950s. The APS-ISI publications will benefit from several sophisticated ISI-inspired hardware and software innovations including the use of artificial intelligence in the formulation of search and retrieval functions used to compile individual search profiles and *Focus On* profiles. ISI has compiled the world's largest science citation database and has combined it with creative state-of-the-art information management techniques.

Monthly *Focus On* compilations will be stored on ISI's mainframe, and subscribers will be notified via the Internet that their publication is ready to be retrieved from a master mailbox. Each subscriber will retrieve the publication via the standard File Transfer Protocol (FTP) procedure available on Internet. Individual *Personal Searcher* profiles, whose frequency (e.g., daily, monthly, bi-monthly) will be determined by the subscriber, also will be accessible via FTP to the subscriber. The subject matter of the *Personal Searcher* profile may be as narrow as the subscriber desires and will be established by the subscriber by informing ISI of the desired combination of keywords, and journal and author names.

Using a combined list of core journals, author names, and keywords, ISI will generate five separate monthly *Focus On* publications for APS members in the following areas of psychology: Biological/Cognitive/Experimental; Clinical and Treatment; Developmental/Educational; Industrial/Organizational/Ergonomics; and Social/Personality. Citations will be included in each of these, based on a given set of keywords, journals, and authors that essentially describe the particular subject area. ISI will conduct a monthly computer search of its citation database using these "defining" elements and will develop an issue of each *Focus On* following review

by an ISI editor. The search elements of a given *Focus On* will be reviewed and modified by an ongoing advisory panel of at least six APS members who are subject experts in that area.

Members of these advisory panels to date include the following people:

Biological/Cognitive/Experimental:

Robert Bjork, Elizabeth Capaldi, Michael Domjan, Emanuel Donchin, Elizabeth Loftus, Lynn Nadel, and Norman Weinberger;

Clinical/Treatment: Richard Bootzin, Ira Iscoe, Richard McFall, Lee Sechrest, and Jane Steinberg;

Developmental/Educational: Scott Brown, Stephen Ceci, Michael Lamb, Ross Parke, Steven Reznick, Richard Weinberg;

Industrial/Organizational/Ergonomics:

James Farr, Daniel Ilgen, Susan Jackson, Kevin Murphy, Benjamin Schneider, Paul Thayer, Christopher Wickens; and

Social/Personality: Marilyn Brewer, Susan Fiske, Robert Krauss, and Virginia O'Leary.

In addition, there are several APS member "beta testers" working with ISI to refine the mechanics of the individually tailored *Personal Searcher* publication.

Why Ask APS?

Discussing the rationale for considering APS as a potential co-developer of such an

innovative set of publications, ISI's Senior Director of Market Research and Product Development, Jim Tumolo said, "One of the most basic considerations in the development of a new concept is need: Does the market sector have a specific need for the product? Taking the process one step further, it must be determined if that market sector can

support the product under consideration: Is the population a large enough base to make the launch successful?"

Following the results of the survey analysis last year, Tumolo said that "APS fit the criteria. Its members are primarily engaged in research and are demanding scholarly information beyond what is now

available. Furthermore, the membership is a large enough base to support a customized product."

Tumolo also explained that "APS indicated a strong interest in participating in the market research necessary to confirm and clarify initial assumptions and to provide product design concepts." He also believes that the "collaborative nature of the effort between ISI and APS guarantees that the products will directly meet the needs of researchers working in the field of psychology—our primary objective."

Expressing similar sentiments, ISI's Hank Riner, Senior Vice President for New Product and Editorial Development, said, "These products are the result of a close working alliance between ISI and APS, and the alliance has been exciting and beneficial to both organizations. APS has helped ISI design and implement the necessary market research, has provided the critical editorial review for the *Focus On* series, and is providing an essential endorsement as well as marketing support."

The Real Thing

Subscribers will be able to order the full text of publications for both products through The Genuine Article, ISI's document delivery service. Ordering the documents will be integrated with these Internet products.

ISI staff will be exhibiting and discussing the new publications at the APS convention in June in Washington, DC, and a special Product Review session hosted by APS's Executive Director will provide a perfect opportunity to view the powerful features of these new publications. ♦



Riner

The Editor welcomes your letters to the Editor

Submit typewritten letters of up to 300 words in paper form and, if possible, on computer diskette: DOS (5.25" or 3.5" diskette) or Macintosh (3.5" diskette). Indicate which word processor you used or, ideally, save as an ASCII or text file.

Watch Your Mailbox: Membership Directory To Arrive Soon!

APS Full Members will soon receive their complimentary 1994 *Membership Directory of the American Psychological Society* (4th edition). To be off press in May, the *Directory* will be the most unique single source of information about the scientific psychology community to date.

In addition to the main alphabetical listing of APS's now over 15,000 members, student affiliates, and fellows, the *Directory* will also list nearly 900 domestic departments of psychology (and related fields) in undergraduate and graduate institutions. Complete with address, phone and fax numbers, this alphabetical listing of psychology-related departments will be the only published one of its kind and will serve as a valuable resource to people wishing to locate individuals or programs.

We're proud of our new cover design. The back cover will feature an indispensable locator to facilitate ready access to the desired *Directory* section. This section locator will make this comprehensive reference tool even easier to use. Another enhancement over the 1992 edition of the *Directory* is the inclusion of a listing of APS's distinguished winners of the William James Fellow Award and the James McKeen Cattell Fellow Award.

Preparation and editing of the *Directory* began in early January but will include members and student affiliates who were recorded as having joined the Society by March 11, 1994. The editor asks each member and student affiliate to carefully review their individual listing in the *Directory* (both in the alphabetical name section and in the institutional affiliation section) and to report any error to the APS Membership Department. Members are invited to use the correction form included in the *Directory*.

Additional individual copies of the *Directory* will be available for sale for \$25 to nonmembers and \$15 for APS members and student affiliates (plus \$3 shipping/handling) in early May. ♦

MORRISETT FROM PAGE 9

conversation with the *Observer*. "Some research evidence showed that children from deprived backgrounds entered school six months to a year behind the others in performance, and by the third grade they were two years behind. So the question was, how could that be ameliorated? We financed at least a dozen research programs, and the findings generally showed that with appropriate interventions, children would be helped. But we had spent about a million dollars and had reached only a few hundred children."

How could the millions more who needed help get help? The question led Morrisett to initial discussions with Joan Ganz Cooney in 1966, who was then at New York's PBS Channel 13. Carnegie funded a feasibility study and in short, Morrisett and Cooney formed the Children's Television Workshop in 1968, with *Sesame Street* going on the air in 1969. Morrisett has been chairman of the board ever since.

A dozen different language versions of the *Sesame Street* model have been created over the past two decades, and almost a hundred countries have used the models or dubbed some of the original programs—with viewers numbering in the millions or billions beyond all counting. Morrisett is closely involved in discussions about new ideas and direction the Workshop may take.

Applying Psychology

"Psychology has been very important to me," Morrisett says, "One of the things I try to do, sometimes successfully and sometimes not, is to relate psychological and social science research to practical applications. *Sesame Street* is the clearest example of that—we directly applied the principles of child development and involved psychologists, talking with television producers about what principles they needed to consider in designing such a show. That work still goes on. That's part of what the Workshop does."

Discussing the role of scientific psychology in his own understanding and career success, Morrisett emphasized, "The grounding I received in experimental methodology and research design has proved very useful in evaluating things I have been involved with ever since." He fondly recalls his student years in the Yale psychology department in the mid-1950s as "a wonderful place to be in those days, absolutely wonderful. My major professor was Carl Hovland well known for his works on mass communications and persuasion. Other professors were Neal Miller, Frank Beach, John Dollard, and Irving Janis"

"At Markle, we try to be very aware of the kinds of psychological research that might help inform decisions in the particular areas, for example, in computer conferencing for senior citizens and our initiatives to put socially useful information on interactive communication systems. We frequently involve psychologists and other social scientists in the discussions we have about new endeavors."

Is the Markle Foundation interested in getting ideas from psychologists? "If they have a hot idea that falls in our areas (communications and interactive technology), sure we are interested, but just any kind of hot idea, no," says Morrisett.

Two APS Charter Members currently conducting research funded by Markle—on long-term effects of childhood television viewing—are John C. Wright of the University of Kansas and Daniel R. Anderson of the University of Massachusetts-Amherst. In the early 1980s the two researchers studied the impact of early television viewing on subsequent academic achievement. They had collected data on 330 families that had a five-year-old child. Now the children are between the ages of 15 and 17, offering a unique opportunity to determine whether exposure to television is related to academic achievement and aspirations. **D.K.**

SimHealth is available for \$29.95 from SimHealth 1-800-824-2643. For information on joining SeniorNet, call 415-750-5030.

Teaching Tips

TEACHING TIPS, premiering in the March 1994 *Observer*, provides the latest in practical advice on the teaching of psychology. TEACHING TIPS is expected to become a regular feature of the *Observer* and is aimed at current and future faculty of two- and four-year colleges and universities.

Complementing the Annual APS Institute on the Teaching of Psychology, TEACHING TIPS will inform 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 Barry Perlman, TEACHING TIPS Editor, Dept. of Psychology, Univ. of Wisconsin-Oshkosh, Oshkosh, WI 54901-8601; Tel.: 414-424-2300; Fax: 414-424-73177, Bitnet: PERLMAN@OSHKOSHW; Internet: PERLMAN@VAXA.CIS.UWOSH.EDU.

How to Improve Your Teaching With the Course Syllabus

Drew C. Appleby

Marian College

Did you ever have a student misunderstand an assignment, want an explanation of how you grade *after* the final exam has been scored and the semester is over, or express surprise that you had considered attendance important? If, like most teachers, you receive a few such remarks every semester, you already appreciate the need for clarity in your communication with students.

One of the best ways to clarify such communication is through your course syllabus. As a teacher, you have probably distributed thousands of them and no doubt have written a score or more, yet often the syllabus is given little serious attention.

But as Rubin (1985) has pointed out, "We keep forgetting that what we know—about our disciplines, about our goals, about our teaching—is not known (or agreed upon) by everyone. We seem to assume that our colleagues and our students will intuitively be able to reconstruct that creature we see in

our mind's eye from the few bones we give them in the syllabus" (p. 56). A poorly written and incomplete syllabus can frustrate both students and teachers and disrupt the whole learning process.

One of the easiest ways to improve your teaching is to increase the communication effectiveness of your syllabi. To do this you need to understand the purposes of a course syllabus and its essential components.

The Purposes of a Course Syllabus

A rather complicated proclamation, the course syllabus serves at least seven basic functions (see Rubin, 1985). Some of these directly serve your students and are readily apparent to them. But as you will see, the syllabus should also serve some of the instructor's needs as well. In summary, a syllabus:

1. Helps Plan and Strengthen Your Course

The very process of writing a well-constructed syllabus forces you to crystallize, articulate, organize, and communicate your thoughts about a course. This thought and writing produces what Gabennesch (1992) calls the en-

riched syllabus. Writing an enriched syllabus compels you to publicly reveal your previously well concealed assumptions. In other words, it makes explicit that which was implicit, and it is the implicit that often confuses and frustrates students.

Try inviting a person—who has no expertise in your academic area—to critique your syllabus. You will be surprised by the number of vagaries and gaps the naive reader will identify. Teachers can easily overlook important matters or be unclear about them in their syllabi, even when they have taught the course for years.

2. Introduces You to Students

Your syllabus allows you to share your pedagogical philosophy with students. Students may not perceive it in quite this way, but that is one of the things you achieve through the syllabus. A syllabus tells your students whether you view learning as an active or passive process and whether you emphasize knowledge enhancement, skill building, or a combination of both.

The syllabus reveals how your course is structured (e.g., simple to complex or

chronologically) and should include the purpose of this organization. Syllabi tell your students if the parts of a course are mutually exclusive or whether success in its later stages depends upon skills mastered earlier. The syllabus also previews your teaching style. Are you organized or disorganized, flexible or rigid, rigorous or lax?

The tone of your syllabus can indicate how approachable you are, and students often form an immediate impression of whether they will like you, and your course, from reading the syllabus. Needless to say, it is better if the impression is positive.

3. Explains Why Students Should Take Your Course

After students read your syllabus, they should know how your course satisfies any departmental or institutional requirement, how it fits into their major, or why it is a valuable elective. Is the course a pre-requisite for more advanced courses, and how would you define the course (e.g., introductory, intermediate, or capstone level)? You may want to indicate who can benefit from the knowledge and skills acquired during this course. Faculty know the answers to these questions—or at least they should—but it is a mistake to assume that students do. If you do not clearly state the purpose and value of your course, your students may believe the main purpose of taking it is simply to fulfill a poorly understood curricular requirement.

4. Explains the Various Aspects of Your Course

Your syllabus should be explicit about assignments and forms of evaluation. Tell your students how your assignments will enable them to accomplish course objectives. Specify elements such as criteria for excellence in assignments, the nature and number of tests, the weighting of assignments in determining the final grade.

Do not forget to communicate the level of participation required. Will your students listen passively as you lecture or should they expect to participate in challenging discussions requiring advance preparation? Similarly, will the emphasis be on primary or secondary materials and

why? You might also want to explain the difference between primary and secondary sources.

A syllabus should also specify the course's pre-requisites, both in terms of courses and pre-requisite skills (e.g., cognitive) or experiences students will need to do well. If you expect your students to perform certain skills, will you teach these skills during the course or will you assume your students possess them when they enter the course (e.g., writing in APA style)? For example, will you require your students to write in APA style?

5. Explains How Students Will Change as a Result of Successfully Completing Your Course

Students should understand what content they will learn, what skills they will develop, and what attitudes, values, and feelings may change as a result of taking the course. Including such information will help you to begin developing some well considered course objectives, if you have not already done so.

6. Communicates the Nature and Content of Your Course to Other Faculty and Administrators

In addition to informing the student, a good syllabus provides a record of your course for colleagues who may teach it later. It can also aid departmental and institutional curriculum planning, and assist outside agencies in assessing program goals and effectiveness.

7. Provides a Documented Record of Your Teaching Career

Your course syllabi are an important teaching legacy. They often provide the only permanent record of your teaching philosophy, commitment to teaching, and pedagogical innovations. If you keep old copies of your course syllabi and read several years' worth at one sitting, you can easily see how you have developed as a teacher; this growth and development is often striking.

When job hunting, syllabi are also integral components of the application portfolio, as are salary and promotion and tenure documents that evaluation commit-

tees request when assessing teaching ability. So, in case you were not yet persuaded, a good syllabus can be as important to you as to your students—unless, of course, you are an independently wealthy tenured professor.

The Essential Components of the Course Syllabus

Once you know the purposes of the syllabus, its basic elements are easily defined, and the following may serve as a simple check-list as you review syllabus content.

Basic Identifying Information

Include the name of your institution, the semester and year, course title and identifying code, location and time of class meetings, and the credits earned for successfully completing the course.

Instructor's Personal Information

Include your name and title, office location, office telephone number, office hours, and E-Mail address if students can communicate with you via this medium. Some instructors include their home telephone numbers, but may specify restrictions on calls to their homes (e.g., no calls between 10:00PM and 8:00AM).

Texts and Other Materials

Specify the titles, authors, and editions of your texts, differentiating between required and recommended status. It is wise to specify locations for obtaining course materials (e.g., bookstore, library, your office, computer lab), the conditions for obtaining them (e.g., whether they must be purchased, are on two-day reserve, or are cleared for photocopying), and the number of copies available (e.g., for reserved material).

Course Description

This usually comes directly from your institution's catalog and should include a brief description of the following items: the major topics covered; the knowledge, skills, and

SEE SYLLABUS ON PAGE 26

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Lyman Porter, Univ. of California-Irvine, *The Washington Post*, Mar. 20, 1994: Utility of job evaluations

Adrian Raine, Univ. of Southern California, *Science*, Mar. 11, 1994: Criminal behavior linked to birth complications; *The Ottawa Citizen*, Feb. 24, 1994: Birth complications and later violent behavior; *The Daily Telegraph*, Feb. 24, 1994: Birth complications and later violent behavior; *Reuters*, Feb. 24, 1994: Birth complications and later violent behavior; *UPI*, Feb. 24, 1994: Birth complications and later violent behavior

Paul Rozin, Univ. of Pennsylvania, *The Washington Post*, Apr. 5, 1994: Role of emotions and environment in cravings

Sandra Scarr, Univ. of Virginia, *Science*, Mar. 11, 1994: Lead exposure and intelligence

Nancy K. Schlossberg, Univ. of Maryland-College Park, *The New York Times*, Mar. 3, 1994: Easing friction over advice from grandparents

Frank Schmidt, Univ. of Iowa, *The Washington Post*, Mar. 20, 1994: Utility of job evaluations

Paul Solomon, Southwestern Vermont Medical Center, *Forbes*, Nov. 22, 1993: Anti-Alzheimer's drug Cognex; *The Washington Post*, Oct. 5, 1993: Alzheimer's drug quandary

Paula Tallal, Rutgers Univ., *Science*, Mar. 11, 1994: Neural mechanisms behind dyslexia

Alan Waterman, Trenton State College, *The New York Times*, Mar. 31, 1994: Adolescents' motivations for wanting to leave home

Nancy Wexler, Columbia Univ., *CBS's 48 Hours*, Mar. 30, 1994: Huntington's disease

Tight Squeeze

I realize this straightforward explanation will offer scant satisfaction to investigators whose applications are caught this year in the new dollar squeeze. Not surprisingly, the very competitive funding situation is a source of impatience and frustration among those applicants who are not likely to receive funding this year. More dangerously for our long-term endeavor, the one-year blip is prompting some to "misread between the lines" what this year's convergence of factors signifies about NIMH's research agenda and researchers' roles in it.

Percentiles

Anxieties about funding prospects for individual grants are compounded by another factor alluded to above: uncertainty about the meaning of the percentile ranking that appears on a grant's summary statement. The percentile formula was devised as a means of ascertaining an application's priority relative to all other new and competing applications reviewed by an IRG over a given (3-cycle) period. The intent was to establish a "spread" that would decompress priority scores that tend to become tightly clustered in competitive areas. But percentile ranking does not indicate "fundability," nor is it synonymous with the success rate of reviewed grants in a given area.

For several reasons, success rate, not percentile score, most accurately indicates the odds that an application will be paid. Even in this rather challenging year, our success rates in all programs are substantially higher than is being inferred from accounts circulating in the field of very low percentile scores not being paid. With the exception of services research, success rates for new and competing basic and clinical RO-1 applications this year will be in the range of 10 to 12 percent, with some variation at the branch level. Furthermore, we fully anticipate that in 1995 NIMH success rates for new and competing RO-1s will parallel those found elsewhere in NIH.

Correcting Assumptions

Given the very high likelihood that the crunch we are experiencing now will ease in 1995, it is all the more important for me to address directly the incorrect assumptions that are so discouraging to some investigators.

One misinterpretation is that basic behavioral science is at a disadvantage in competition with basic neuroscience. This is not the case. In fact, both areas, with their multiple disciplines, are funded through the same division, the one that this year carries the largest burden of continuation obligations. As a result of the catch-up funding of past years, the Division of Neuroscience and Behavioral Science is now funding more grants than ever before. Further, given the nature of NIMH-supported neuroscience—i.e., a focus on integrative processes that demand a level of behavioral sophistication not common in molecular neuroscience—our investments in both areas are necessarily parallel, and in both, psychologists and other behavioral scientists represent the majority of principal investigators. In addition, behavioral science can and must play a role in services research, and we will work with investigators to explore ways to meld behavioral expertise to the existing services research enterprise.

For reasons discussed earlier, some individuals have surmised an Institute plan that discounts their specific field. No such plan exists. For the remainder of this year, the most difficult funding situation is in basic neuroscience, with slightly less pressure on the basic behavioral fields and slightly less, again, on clinical research. Our analyses of long-term funding trends support our conclusion that the immediate pressure points essentially reflect the cyclical patterns that occur regularly in all fields. I should note in this context, too, that the pressure on RO-1s is not a function of preferential funding of large research Centers. Last year, we funded two new Behavioral Science Research Centers, at Wisconsin and North Carolina. This year, we anticipate that the total number of NIMH-funded Centers will hold steady at last year's level.

Similarly, another new NIMH behavioral science initiative, B/START (Behavioral Science Track Award for Rapid Transition) is designed to assist new investigators in

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Obituaries

Learning and Memory Expert David S. Olton (1943-1994)

When David Olton died on February 1, 1994, at 51 years of age, those of us close to him were stunned, first by the realization of how few years he had been among us, second by the magnitude of what he was able to accomplish during that time.

My first memory of David was the day he came to Johns Hopkins for his job interview in the winter of 1969. He was finishing his PhD with Robert Isaacson at the University of Florida, having moved with Isaacson to that institution from the University of Michigan (from which he actually received his degree). It was snowing in Baltimore, and threatening to deteriorate into freezing rain (not uncommon for Maryland) with all the treachery that promised in a city that has never gotten used to such things. We were eager to hear what David had to say about his work, but also eager to see that he (and we) got any subsequent travelling we had to do out of the way as soon as possible. His presentation (on hippocampal lesions and active avoidance) was impressive, as one might expect, but it also promised more than the time appeared prudently to allow. David prevailed, nevertheless, insisting (in spite of obvious developments out the window) that we hear absolutely everything he had to say. He got the job, not only because of his science, but also, I think, because of his zeal.

In the subsequent years, that zeal and the talent behind it translated themselves into an extraordinary scientific output on a variety of topics. Probably best known is all his work on the role of the hippocampus in learning and memory. David established the radial arm maze as a device of choice in the study of that problem, but the research he stimulated with his initial experiments with the maze spread to stimulate work on a variety of problems in spatial and serial memory. As time passed, his interest in the role of brain neurochemistry and memory became a large portion of the research enterprise. Most recently he was working on aging and the interaction between brain and behavior. His bibliography includes almost 200 articles and chapters.

With Aaron Noonberg, he published his only book, *Biofeedback: Clinical Applications in Behavioral Medicine*, in 1980, after becoming interested in the problem of biofeedback through an undergraduate course he taught in which Noonberg was a student. David's interaction with Noonberg was typical of David's interactions with many students, both undergraduate and graduate. He advised all the students in an undergraduate major in Behavioral Biology that he developed and coordinated—some 85 of them each year. As for graduate and postdoctoral students,



not only did he teach them, he nurtured them both personally and professionally. He helped them move and find places to live, he entertained them at his home and over plates of crabs in Baltimore restaurants. He taught them what to do when they attended professional meetings—to learn not only about psychology, but also about the behavior of psychologists. His professional colleagues were often pleased to find, on more than one occasion, that they, too, were his students.

His profession honored him appropriately, and the honors would have no doubt continued. He was Chairman of the Department of Psychology at Hopkins for more than four years. He gave many invited lectures at universities, including the D.O. Hebb lecture at McGill University, and at the meetings of many professional societies, including the American Psychological Association, and various regional psychological associations. He was a member of the Program Committee for the 1990 meeting of the American Psychological Society (APS). He was recently elected a Councilor of the Society for Neuroscience and was a Charter Member of APS.

David was a man of enthusiasms, and his enthusiasms ranged far beyond his science. He raised vegetables—and sheep—on a small plot next to the house where he lived. He often rode a bike from that home to the University, a one-way trip of some 26 miles. He skied cross country—when Baltimore winters permitted—and often at conferences and meetings in snowier places. In later years he discovered swing dancing and became president of his local swing-dancing group. His 50th birthday party was a gala event where everyone danced, even those who were not quite sure they could manage the process.

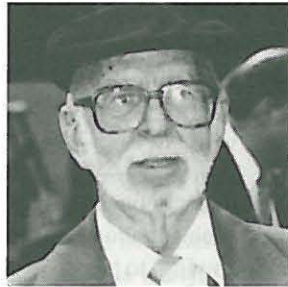
His 51st birthday was celebrated by a Fest held at Johns Hopkins in his honor on January 15, 1994. By this time, he was quite ill, but for part of the time he was able to join the more than 120 people from all over the world who were able to get to Baltimore and present papers on short notice. If those of us who were there were sometimes subdued, David was, as usual, enthused and delighted.

David S. Olton was born in Montclair, New Jersey, on January 15, 1943, and died of pancreatic cancer on February 1, 1994. He graduated from Haverford College in 1964. He received his PhD from Michigan University in 1969 and joined the Johns Hopkins faculty that year. He is survived by his father, the Rev. Robert M. Olton, a sister, Judith Olton Mueller, and a brother Robert M. Olton, Jr. He was separated from his wife, Lisbeth Redfield Olton.

STEWART H. HULSE
JOHNS HOPKINS UNIVERSITY

Founder of Nationally Acclaimed School E. Lakin Phillips (1916-1994)

E. Lakin Phillips, an APS Charter Fellow and George Washington University Professor Emeritus, died on March 15 of pneumonia at George Washington University Hospital in Washington, DC.



One of his most notable professional achievements was the establishment in 1967 of the School for Contemporary Education (SCE), a center for special education and community services. The SCE, an outgrowth of Lakin's private practice in the Washington metropolitan area, has received national recognition for its successful application of scientific psychological principles to the amelioration of behavioral and learning problems in school-age children (January 1994 *APS Observer*).

After earning his undergraduate degree at Missouri State University and serving in the US Army in Europe, Lakin went on to earn his doctorate in psychology at the University of Minnesota. He also studied at the Washington School of Psychiatry.

While maintaining a private practice in clinical psychology, Lakin was a full professor at The George Washington University. He served as the Director of The George Washington University Counseling Center until his retirement in 1985. Upon retirement he was given Professor Emeritus status by the University.

The SCE, Lakin's most prized achievement, serves children with various disabilities including mental retardation, emotional disturbance, autism, and severe learning disabilities. As founder and a generous contributor to SCE, Lakin was honored at SCE's 25th anniversary celebration in May 1994. He was also honored this past October when SCE was named a Blue Ribbon School of Excellence by the United States Department of Education.

Throughout his career Lakin earned a significant reputation as an author of 21 books and over 200 articles on various aspects of psychology. His most recent writing, *Permissiveness in Child Raising and Education: A Failed Doctrine?*, was published in 1993 by University Press of America. Lakin inspired many in the international special education community through his guest lecturing throughout the world.

Lakin's interests reached beyond academia and the world of psychology. He was a creative inventor, holding several patents, and a longtime supporter of the arts and a wood sculptor. His business interests included real estate and land development.

Lakin Phillips was known as a visionary, an innovative and creative thinker. To the end of his life he maintained his dedication to children and his interests in research, writing, and educating. While his contributions to the field of psychology are extensive, it is his contribution to the lives of children with disabilities which will long be remembered by the children, their families, and the people who work with them.

Born in Higginsville, Missouri, in 1916, Phillips is survived by four children and six grandchildren. He will be missed by family and colleagues alike.

SALLY A. SIBLEY
ADMINISTRATIVE DIRECTOR
SCHOOL FOR CONTEMPORARY EDUCATION



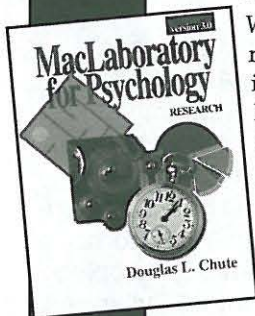
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attitudes acquired; pre-requisites; and any special opportunities (e.g., field trips).

Course Objectives

This section is of particular importance because of the current emphasis on the assessment of student learning outcomes. Clearly state your objectives. I recommend Gronland's 1991 publication, *How to Write and Use Instructional Objectives*, if you are unsure of how to write objectives in this manner. Objectives can be cognitive (e.g., understands the nature-nurture controversy), affective (e.g., appreciates the role of psychology in everyday life), or behavioral (e.g., can administer an IQ test). A clear set of instructional objectives provides direction for instructional methods, yields guidelines for testing, and communicates instructional intent to students.

Course Requirements

Explain exactly what a student is expected to do in your course including a clear description of the tests administered, the papers written, and the oral presentations made.

Course Calendar

Your calendar contains the dates of specific lecture topics, reading assignments, exams, and deadlines for papers and other projects. Any changes to your calendar should be supplied to students in writing.

Grading Procedures and Scales

Make explicit your procedures and criteria for evaluating students' perfor-

mance and assigning grades. Clear policies regarding extra credit, make-up tests, deadlines, and penalties for post-deadline work are necessary. Include an academic honesty policy with definitions of academically dishonest behaviors (e.g., plagiarism and cheating) and sanctions for their occurrence if your school does not emphasize this concept in its literature (i.e., the catalog).

Caveat

A syllabus is a written contract between you and your students. End each syllabus with a caveat, such as the following, to protect you, your department, and your institution if changes in the syllabus must be made once your course is underway: "The above schedule and procedures in this course are subject to change in the event of extenuating circumstances" (Altman, 1989, p. 1).

It is imperative that teachers adhere faithfully to the policies and requirements set forth in their own syllabi. Do not forget the reciprocal nature of this contract. By requiring students to abide by the rules and procedures spelled out in your syllabus, you are also agreeing to do the same. A well written syllabus will make these expectations clear to all concerned. You should plan to discuss the syllabus in detail during the first class meeting. This brings up the need for prompt distribution of syllabi. They should be available on the first day of class, not a week or month into the semester. After all, if you expect students to meet deadlines for examinations and other course requirements, you should meet your own teaching deadlines, and distributing the course syllabus during the first class meeting is important.

Conclusion

Good syllabi fulfill specific purposes, possess essential components, and answer crucial questions. However, few syllabi perform all these functions equally well. My advice is this: Try to write syllabi that are as brief and focused as possible but which communicate the nature of your course to students in a clear and understandable manner. The better your students understand the purposes and procedures of your course, the more likely they are to enter enthusiastically into the learning partnership you offer them.

Recommended Readings

- Altman, H. (1989). Syllabus shares what the teacher wants. *The Teaching Professor*, 3(5), pp. 1-2.
- Bloom, B.S., Englehart, M.D., Furst, E.J., & Krathwohl, D.R. (1956). *Taxonomy of educational objectives: Cognitive domain*. New York: McKay.
- Gabennesch, H. (1992). The enriched syllabus: To convey a larger vision. *The National Teaching & Learning Forum*, 1(4), pp. 4-5.
- Gronland, N.E. (1991). *How to write and use instructional objectives*. New York: Macmillan.
- Lowther, M.A., Stark, J.S., & Martens, G.G. (1989). *Preparing course syllabi for improved communication*. Ann Arbor, Michigan: The National Center for Research to Improve Postsecondary Teaching and Learning.
- Rubin, S. (1985, August 7). Professors, students, and the syllabus. *The Chronicle of Higher Education*, p. 56.

Relocating?

Be sure to notify the
APS Membership Officer at
American Psychological Society
1010 Vermont Ave, NW
Suite 1100
Washington, DC 20005-4907

Include a copy of your mailing label to speed processing. Don't forget to mention changes in your email address and phone and fax numbers!

Drew Appleby chairs the Psychology Department at Marian College in Indianapolis, Indiana, where he has been on the faculty since 1972. He received his PhD in experimental psychology in 1972 from Iowa State University. Appleby is Director of Project Syllabus (sponsored by Teaching of Psychology Division of the American Psychological Association).

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behavioral research and is not an issue in this year's funding. In fact, B/START's major budget impact will be in next year's budget when we will be able to more equitably balance the NIMH portfolio. The result of B/START should well be more overall funding money for behavioral science, not less.

Another concern derives, in part, from the well-publicized announcement of the NIMH-led, multi-agency sponsored Human Brain Project (HBP), implemented to build a research infrastructure capable of supporting and coordinating the development of cutting edge technologies in the context of neuroscience research by taking advantage of the national information superhighway. Such technologies include computer databases of neuroscience information, network systems, and associated tools which will allow information to be shared, integrated, and synthesized. Launched in April 1993, the HBP is still in a start-up phase and does not account for current budget challenges. One concern being voiced in the field is that the HBP signifies a shift in NIMH research support policy toward "big science," at the expense of traditional investigator-initiated research. In fact, current HBP funding is in the RO-1 category, and will generate increased opportunities for RO-1 support in multiple fields and disciplines.

I hesitated to begin this message with a refrain that has, in recent years, become cliché in behavioral and biomedical research circles: That we in the mental health research field find ourselves in the best and worst of times. But I believe the facts support the refrain, and I intend for this message to encourage

researchers who are caught in the peculiar constellation of factors that are so dramatically evident this year. NIMH will continue, in good faith, to solicit research proposals from the behavioral science community. One measure of our commitment to the field is the impending issuance, by the National Advisory Mental Health Council, of a National Plan for Basic Behavioral Research. We foresee that this Plan—for which Congress has requested an implementation schedule within 60 days of issuance—will provide research guidance and goals that will be engaged as successfully as those of previous National Plans in the areas of schizophrenia, neuroscience, services for persons with severe mental illnesses, and child/adolescent disorders.

With the field, we continue to look forward to the establishment of and our opportunities to collaborate with and contribute to the planned NIH Office of Behavioral and Social Research.

Finally, let me note that in the immediate future I plan to step aside as NIMH Director. Pending the results of a national search, interim leadership of NIMH will be provided by Rex Cowdry, a long-time member of the Institute. Cowdry most recently has served as Chief Executive Officer of the Neuropsychiatric Research Hospital, Intramural Research Program and, previously, as Acting NIMH Deputy Director under Frank Sullivan. My own plans include establishment of a new Center for Science, Medicine, and Human Values at the George Washington University Medical Center, where I will also serve as Professor of Psychiatry and Director of the Center on Neuroscience and Psychiatry. I look forward eagerly to contributing in these new roles to the scientific and policy challenges before our field. ♦

Animal Guidelines Misleading to Psychologists

APS members who use animals in the teaching of psychology should be aware of a somewhat misleading section—on the use of animals in post-secondary school education—in the new *Institutional Animal Care and Use Committee Guidebook* prepared by the Applied Research Ethics National Association (ARENA). The *Guidebook*, which incorporates federal regulations on the use of animals in research, is issued by the National Institutes of Health (NIH) Office of Protection from Research Risks (OPRR) and is an overall excellent guide to assist IACUC (Institutional Animal Care and Use Committee) members. However, the guidebook does not carry the weight of law, unlike the NIH *Guide for the Care and Use of Laboratory Animals*.

In the section on the instructional uses of animals, the *Guidebook* places an undue emphasis on psychology and makes very restrictive recommendations that appear to forbid certain uses of animals in teaching. In fact, at least one institution cancelled a laboratory course in physiological

psychology because the IACUC believed the OPRR-approved *Guidebook* prohibited exercises involving stereotaxic placement of classical lesions for teaching purposes even though the IACUC unanimously agreed to the educational value of the exercises.

An ad hoc committee that included, among others, representatives from the NIH Office of Laboratory Animal Research and the Program for Animal Research Issues at the National Institute of Mental Health, reviewed the *Guidebook* and made recommendations for revising the section to make it conform more with the legislative and federal regulatory intent on the appropriate uses of animals in education. ARENA has adopted the ad hoc committee's recommended revision and will be placing an announcement of the revision in various professional publications in the near future. For more information, call the Office of Protection from Research Risks in Maryland at 301-496-7005.

The Student Notebook — Stephen Fiore - Editor

Simple Process Starts a Chapter

Many schools have contacted Sunni Reilman, the current Chapter Recruitment Chair, to inquire about starting an APS student chapter on their campus. The Executive Council is always looking for eager students interested in starting a chapter at their school. Establishing a chapter is rather simple, and the requirements are few.

Students interested in starting a chapter should check with their faculty to locate a member of APS who is willing to serve as a sponsor. That faculty sponsor, or a student, should contact the Chapter Recruitment Chair for an application packet (see address in box on next page). The packet contains our mission statement, a list of officers, and a form to be read and signed by the sponsor and at least five students who have applied for APS student affiliate status. Mail the application to the Chapter Recruitment Chair, and, if all is order, your chapter will be approved and a certificate mailed to the sponsor.

Chapter benefits include financial assistance in sponsoring your own conferences, recognition by APS itself, contacts with other chapters, a forum through which needs can be represented, and various contests (like last year's recruitment contest with a \$200 prize). This Student Notebook section of the *Observer* has been given to us to recognize the accomplishments of chapters as well as to communicate with individual members. If you are a member of a chapter and would like advice about activities or events you are planning, please contact the Chapter Recruitment Chair for assistance.

Executive Council Elections

This summer at the APS conference in Washington the APSSC will hold elections for Executive Council positions for the 1994-1995 year. Candidates may announce their candidacy up until the offices are voted upon at the conference. Any of the Society's student affiliates are welcome to run for the offices: President, Graduate Advocate, Undergraduate Advocate, Secretary, Treasurer, and Student Notebook Editor.

Responsibilities for each position, per APSSC bylaws, are listed below. Other positions such as Mentorship Chair and Chapter Recruitment Chair will be appointed at the national conference by the incoming president, subject to Executive Council approval.

Students who want to be involved in Student Caucus activities are encouraged to attend the Washington conference. Even those who cannot make it can contact any APSSC officer to discuss how they might participate. The 1993-94 officers' names and addresses appear in the Student Notebook (see box opposite page), and the 1994-95 officers will be announced in our next edition.

PRESIDENT: Will be the exclusive liaison between the Student Caucus and the Board of Directors, will chair the APSSC Executive Council meetings, and will serve as an ex-officio head of all non-standing committees.

GRADUATE ADVOCATE: Serves as a graduate students' advocate and assists, within practical resources, the recruiting of graduate student affiliates. Acts as student representative to the APS Graduate Education Task Force.

UNDERGRADUATE ADVOCATE: Serves as an undergraduate advocate and assists in student recruitment. The officer must be an undergraduate to allow fair representation on the council.

SECRETARY: Is responsible for the Executive Council minutes and information networking.

TREASURER: Is chair of the budget committee, makes budget proposals to the council and serves as chair of fund-raisers.

STUDENT EDITOR-IN-CHIEF: Chairs the editorial committee and is the exclusive liaison between APSSC and the *APS Observer*. Any submissions claiming to represent APSSC must be endorsed by the Student Editor-in-Chief before they are forwarded to APS for any further consideration.

NETTALK . . .

The Student Caucus sponsored "net" (APSSCNET) is an electronic mail system created for students. Its purpose is to provide a means of open discussion on issues related to student life, relevant political events, and research interests. Also included is information about post-doctoral and career opportunities. If you would like to subscribe to this no-cost system, you need a computer account that permits Bitnet or Internet access. Please subscribe by sending a message to:

LISTSERV@GIBBS.OIT.UNC.EDU

The first line of the message should be:
SUB APSSCNET FIRST_NAME LAST_NAME

When you subscribe, you will receive information about the network and introductory details. If you have any problems subscribing, or any questions about the "net," please contact the list owner, Kimberly Delemos, at: KIMDELE@GIBBS.OIT.UNC.EDU. Join us on the network...

The APS Student Caucus represents all the Society's student affiliates. It is not an honor society. All chapter chairs are additionally recognized as members of the APSSC Advisory Committee. For information on APSSC school chapter applications:

Sunni Reilman
PO Box 18134
Colorado Springs, CO 80935
Tel.: 719-577-1098

Chapter founders should provide information on the institution, department, and students, and designate a faculty sponsor.

ASK AUNT KENN . . .

Dear Aunt Kenn,

I've heard a lot about the "Information Superhighway." What's the deal?

Signed,

A fan in Atlanta, Georgia

Dear Fan,

Your Aunt has looked into this information highway thing and has found some very interesting things. First, this business about the "future" information highway is a bit misleading, as many of the wouldn't-it-be-great-if features are already here today. The Internet and CompuServe are examples that come to mind.

If you haven't yet found out about the Internet, by all means do! I would suggest two or three fabulous books to whet your appetite. *The Whole Internet* by Ed Krol is very nice; also *The Art of Internet*, and *The Internet for Dummies* (no, I am not making these up) are very popular. Most university book stores and commercial outlets should have at least one of these.

In essence, the Internet was a creation born of the mother of necessity (did I get that right?). The project was originated by the Department of Defense as a means of linking military and civilian research centers together to share information. It soon grew into a more general-purpose computer network linking research universities, the government, and private corporations together. Today the Internet allows virtually anyone to communicate and search for information at any major university and many government institutions in the world.

What kind of information? Well, dissertations, abstracts, rare papers and manuscripts, CD-ROM literature searches like PsycLit, MedLine, and ERIC. However, PsycLit and MedLine, because they are commercial ventures, usually are offered for public access during brief periods of time, typically during a testing phase of a new university Internet or Gopher link.

"Gopher?" you ask—what the heck is gopher? Gopher is a menu-driven map into the Internet. It will let you peruse any major library in the world. You can look up census data, and get text listings of millions of documents, ranging from the Magna Carta, to the Dead Sea Scrolls, to NAFTA—word for word! Other resources include instantaneous access to the technical folks at, say SPSS or SAS, for a quick question. The possibilities are endless! Below are some forums, or "lists" in the parlance of Internet, that your Aunt thought you might be interested in. To subscribe to them, or read the messages posted (in some cases, hundreds per day), you usually need a university e-mail computer account.

To subscribe to most of these, simply take the part of the name past the "@" sign. So, for example, if I was trying to subscribe to the APS Student Caucus Discussion which is listed as "APSSCNET@MCGILL1," I would mail to the "listserv at MCGILL1" like this:

mail Listserv@MCGILL1
Subject: [leave this blank]
SUB APSSCNET Aunt Kenn

And that's all there is to it! Ask the computer science folks at your institution for more details about subscribing to Internet lists. Also, take a look at the books your Aunt mentioned earlier. Have fun kids!

Love,
Aunt Kenn

A mishmash of Internet-accessible lists for psychology:

APASD-L@VTVM2	APA Research Psychology Network
APB-L@LAVALVM1	Advancement of Paradigmatic Behaviorism
APSSCNET@MCGILL1	American Psychological Society Student Caucus
AUDITORY@MCGILL1	Research in auditory perception
AUTISM@SJUVVM	SJU Autism and Developmental Disabilities List
BEHAVIOR@ASUACAD	Behavioral and Emotional Disorders in Children
BSOFT@INDYCMS.BITNET	For users of any kind of citation software
BIXANET@JHUVVM	Brainwave Systems users group
BRAIN-L@MCGILL1	Mind-Brain Discussion Group
CHAOPSY@UVMVM	CHAOS in Psychology
COGSCI-L@MCGILL1	Cognitive Science Centre
EAWOP-L@HEARN	The European Association of Work and Organizations
ENVBEH-L@POLYVM	Forum on Environment and Human Behavior
FRSS-L@UCSBVM	ORDA Funding Resource Newsletter-Social Science
HPSST-L@QUCDN	History and Philosophy of Science
IOOB-L@UGA	Industrial Psychology
MPSYCH-L@BROWNVVM	Society for Mathematical Psychology
NEURO1-L@UICVM	Neuroscience Information Forum
NEUS582@UICVM	Methods in Modern Neuroscience
PSYC@PUCC	PSYCOLOQUY: Refereed Electronic Journal
PSYCGRAD@UOTTAWA	Psychology Graduate Students
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APSSC Officers ♦ 1994

All the officers welcome students and others who wish to contact them about concerns particular to their own offices.

Executive Council

President

Dianna Newbern
Department of Psychology
Texas Christian University
Fort Worth, TX 76129 Tel.: 817-921-7415
Bitnet: RP901PS@TCUAMUS

Graduate Advocate

Kenn White
11235 Oakleaf Drive, #2013
Silver Spring, MD 20901 Tel.: 301-681-5520
Email: KWHITE@WAM.UMD.EDU

Co-Undergraduate Advocate

Rachel Jo Pallen
401 Adams Street
Plover, WI 54467
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c/o Psychology Department
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Crawfordsville, IN 47933

Student Notebook Editor

Stephen Fiore
Department of Psychology
601 Learning Research & Development Center
University of Pittsburgh
Pittsburgh, PA 15260
Email: SFIOR@VMS.CIS.PITT.EDU

Secretary

Kim Delemos
Department of Psychology
CB #3270, Davie Hall
University of North Carolina-Chapel Hill
Chapel Hill, NC 27599 Tel.: 919-942-0794
Email: UKIM@UNCMVS.OIT.UNC.EDU

Treasurer

Jennifer Bugg
4851 Bluestem Drive
Colorado Springs, CO 80917
Email: JLBUGG@UCCS.EDU

Past President

Bonnie Eberhardt
PO Box 10819
Calder Square
State College, PA 16805 Tel.: 814-234-8879
Bitnet: BKE100@PSUVM

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Department of Psychology
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Carbondale, IL 62901

Psi Chi Liaison

Jacquie Pickrell
14407-172nd Avenue NE
Redmond, WA 98052
Email: JPICK@U.WASHINGTON.EDU

PETERSEN FROM PAGE 1

for psychological science at NSF. Shortly after President Clinton announced that he would be appointing Petersen, APS Executive Director Alan Kraut delivered testimony on the NSF budget to the subcommittee of the House of Representatives responsible for the Foundation's appropriations. "We are extremely encouraged by the pending appointment of

Dr. Petersen, a distinguished psychology researcher and academic administrator, and we view this as additional evidence of the Administration's support for behavioral science as part of NSF's mission," Kraut told the lawmakers.

Petersen credits APS with playing a major role in her upcoming move to Washington, saying that she would not have pursued the position without APS's encouragement. "This never would have happened without you," she said, noting

that it was APS that first recommended her and who then worked on behalf of her nomination.

Been There, Done That

Petersen is known both as a pioneering scientist with an outstanding career in research and as an extremely effective administrator. She will come to Washington from the University of Minnesota where since 1992 she has been Vice President for Research, Dean of the Graduate School, and Professor of Adolescent Development and Pediatrics. Before that, she was a Dean at Pennsylvania State University.

There is widespread support for Petersen from her colleagues who universally greet the news of her appointment with enthusiasm and praise. She is adept at forging effective interdisciplinary teams. APS Secretary and former Penn State colleague Robert F. Plomin said that Petersen amply demonstrated her ability to "bring together biologically and behaviorally oriented scientists" when she was tapped to be Dean of what was then Penn State's new College of Health and Human Development.

In forming the college, Petersen "did a marvelous job of combining bits of departments" from disparate fields and making it work, said Plomin, who is a professor in the college. "That ought to be a good sign for her prospects at NSF," he noted.

Plomin attributes her strength as a builder of interdisciplinary groups in part to her own research interests. "She clearly views herself as a bio-behavioral psychologist," he said, adding that much of Petersen's work reflects her interest in understanding how behavior can influence biology.

Breaking Barriers

Throughout her career, Petersen has served on numerous federal advisory panels, including the Advisory Council of the National Institute on Child Health and Human Development, and has been involved in different capacities with the health programs of the John D. and Catherine T. MacArthur Foundation and the Robert Wood Johnson Foundation.

THE PSYCHOLOGICAL RECORD

SELECTED RECENT ARTICLES

On the Context of Yawning: When, Where, and Why? Monica Greco, Ronald Baenninger, and John Govern.

Outline for a Functional Analysis of Imitation in Animals. Maureen L. Howard and Michael Keenan.

Vagaries of Science; Priority, Independent Discovery, and the Quest for Recognition. George Windholz and P. A. Lamal.

The Pavlov-Yerkes Connection: What Was Its Origin? Randall D. Wight.

The Influence of Birth Order and Family Size on Notable American Women's Selection of Careers. Patricia Bohmer and Sarah Stitton.

Serial Reversals of Concurrent Auditory Discriminations in Rats. William V. Dube, Thomas D. Callahan, and William J. McIvane.

Pigeons' Novel Behavior Governed by Multiple Controlling Stimuli. Santiago Benjumea and Maria F. Arias.

An Analysis and Topical Bibliography of the Last Ten Years of Human Operant Behavior: From Minority to Near Majority (1982 - 1992). Donald M. Dougherty, Marcus Nedelman, and Melanie Allred.

A Further Attempt to Demonstrate Hypernesia in Recognition. Hajime Otani and Mark J. Stimson.

Uncertainty and the Perception of Sufficiency of Social Support, Control, and Information. Yoram Bar-Tal.

The Effect of Token Reinforcement on WISC-R Performance for Fifth through Ninth Grade American Indians. Robert Devers, Sharon Bradley-Johnson, and C. Merle Johnson.

Coping with Cold-Pressor Pain: Effects of Mood and Covert Imaginal Modeling. James B. Hertel and Hamid M. Hekmat.

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Organizational Profile

Latin American Association for the
Analysis and Modification of Behavior

Origins and Purpose

The goal of the Latin American Association for the Analysis and Modification of Behavior (ALAMOC) is to promote the applications of and basic research in the experimental analysis of behavior, at an international level. Although the majority of the members live in Latin America, the Association also has activities in the United States and Spain. Its activities include a bi-annual Congress and scientific publications. In the last Congress (in Ecuador) papers were presented on issues such as philosophy and methodology, experimental animal research, human research, educational problems, behavior therapy, cognitive therapy, organizational behavior, industrial/organizational issues from a behavioral perspective, design of cultures, health psychology and behavioral medicine, community psychology, sport psychology, and behavioral gerontology.

Membership

ALAMOC has approximately 800 members residing in many Latin American countries, North America, and Europe. To be eligible for membership, a person must have a degree in psychology, medicine, education, sociology, or an allied discipline. The majority of the members are psychologists, but psychiatrists, educators, and social workers, among others are members.

The "Organizational Profile," a regular feature of the *APS Observer*, informs the research community about organizations devoted to serving psychological scientists and academics. It is difficult for anyone to keep abreast of the various organizations of potential personal interest. This section should help in that task. The Editor welcomes your suggestions as to organizations warranting coverage.

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BACKGROUND

The Latin American Association for the Analysis and Modification of Behavior (ALAMOC) was founded in 1975, in Bogotá, Columbia, by psychologists interested in research and applications in the experimental analysis of behavior. The first President was Rubín Ardila. ALAMOC held its first Congress in Panamá in 1977; it was organized by Pablo A. Thalassinós.

ALAMOC publishes a journal, *Aprendizaje y Comportamiento/ Learning and Behavior*, contains articles in Spanish with abstracts in Spanish and English. The current editor is Rafael Navarro (Perú). The *Boletín* newsletter publishes information about scientific psychology and is edited by Wilson Lopez-Lopez (Columbia).

The Association has been very active in the promotion of research and applications in the experimental analysis of behavior, including social issues, clinical problems, experimental foundations, methodology, education and training as well as cognitive-behavior therapy.

ALAMOC has organized seven meetings for the Latin American Congress of Analysis and Modification of Behavior, with large participation from a variety of countries, including the United States and Canada. At present, these congresses are the main forum for behavior analysis in Latin America. Also, ALAMOC organizes seminars, workshops, and symposia in several cities.

Contact:

For information on membership and the bi-annual Congress, contact:

Rafael Navarro
ALAMOC
Avenida del Ejército 585
Lima 18, Perú
Tel.: (51-14)-413585

WOMEN FROM PAGE 4

women employed in business/industry is close to the proportion of women found in all full time employment. (The psychology business/industry work force was 24% female in 1981 and 34% in 1991.)



Vetter

But an important confound in these data, according to Kohout, is that many private practitioners, when asked to designate "Business/Industry" or "Self-Employed" will chose "Business/Industry," and private practice represents a very large number of all psychologists—some 36%, according to NSF's 1988 report *Profiles - Psychology: Human Resources and Funding* (NSF 88-325).

According to Kohout, women psychologists are more likely than men to fall into this category, concluding that women are indeed underrepresented in [large] industry in psychology, despite their large numbers in the field. It is not clear, then, that women psychologists in industry have achieved at least a "critical mass" of about 30%, the proportion necessary for not feeling isolated and out of place, says Betty Vetter, the Executive Director of the Washington, DC-based Commission on Professionals in Science and Technology.



Cantor

Women are also proportionally represented in educational institutions; education, business and industry together account for over 70% of all full time employment for psychologists. In other words, if women are underrepresented in industry, it must be because they are in private practice, and not because they are overrepresented in academe. Admittedly, this speaks more to finding industrial employment than to seeking it, but we found no data on job searches per se.

Exit Rates

Studies by Anne Preston (State University of New York-Stony Brook), cited in the NAS report, show very high exit rates for women physical scientists employed in industry. This research did not cover behavioral, life, or social sciences. But according to Vetter, women scientists are not as well represented in total employment as the "pipeline" model

(supply of new trainees) would predict, nor do the salaries or ranks of women rise as rapidly as those of men with similar training. Inequality of pay and promotion is at least as important an issue as the number of employees, and is an important component of the hostile atmosphere encountered by women in the workplace.

Vetter indicated that the federal government is better than other sectors for initial hires, but not for promotion or pay of women scientists in general. Similarly, in academe, women are less likely than men to be tenured or in tenure-track jobs. According to Crosby, these patterns of discrimination in hiring, pay, and promotions are not easily perceived, until one is presented with the overall statistics.

Many men and women are able to explain away all the individual cases they know of, including their own. One reason is that the input considerations for promotion, for example, are subjective. While a man may be promoted for his strong points, and a woman may be denied promotion because of her weak points, either case would be plausible by itself. The inequity is unlikely to be perceived until the two cases are presented side by side.

Perceptions

Research by psychologist Virginia O'Leary, Indiana State University, demonstrates a persistent source of double standards; if male and female actors are observed acting out identical scripts, different motivations are attributed to the women than to the men by both male and female observers. "Criticism or confrontation by a man may be seen as just doing his job, while the same behavior is usually perceived as much more negative or hostile when done by a woman." What is seen as "flexibility" in a man is labeled "inconsistency" in a woman.

The dearth of senior women in a field makes it hard for young women to network effectively and unlikely they can find a mentor. Men are reluctant to mentor women, says Linda Skidmore, the NRC report's staff director, because they think it may be interpreted as something else, or something more, by the protegee, or by a jealous spouse. There are, nonetheless, some counter examples in industry,

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where male managers have been trained to take the sex issue out of the workplace and to be professional in the way they treat women. Some corporations that have recognized the importance of changing the old patterns, according to the NAS report, and have made great strides. Research psychologist and NAS panel member Nancy Cantor puts it this way: "Corporations are not run by dolts; they know the problems of two-career families, and they know that happy workers are productive workers. Academia hasn't thought this through yet."

In their book, *Job Queues, Gender Queues*, Barbara F. Reskin and Patricia A. Roos examine case studies of women's inroads into male (blue collar) occupations and describe how what looks like equality can be a hollow victory. A common sequence of events is that a job changes, due to automation or other technical advances, and becomes less demanding, or a new job arises that is superficially like the old, but is less demanding, and women



Tenopyr

are able to find work in these positions. Either a new female job is created, or an existing job is feminized, meaning that gender integration of specific jobs may never occur, or may represent only a transitional phase on the way to feminization. Women continue to be ranked below men by employers, and only because most men now consider the job undesirable can women get the work.

APS Fellow Mary Tenopyr, AT&T, finds that human resources psychology is not professionalized in the United States like it is in Europe. Industrial psychology has become feminized, she says, and the salaries and job classifications have dropped.

Revolution or Devolution?

Is psychology at the forefront of a revolution in gender equality, or is psychology being demoted to "woman's work"? When and how will our society outgrow the prejudice that women and their work are inferior? When will women participate and compete as equals in the labor market? Is industry less advanced than other sectors in this respect? Will

economic realities eventually put industry ahead?

Crosby tells the story of her sister, a physician, who was at the beach when a man was taken ill and needed to be rushed to the hospital. Remembering there was a drawbridge on the way, she instructed some local men to instruct the bridge tender to make sure the bridge was down. Upon reaching the bridge with the sick man, they were delayed because the bridge was up. Evidently, the messengers had seen a petite woman in a bikini, who had asked that the bridge be down; they had not heard that "Dr. Allen" had made the request. The victim died. "Can we really afford not to take full advantage of the abilities and expertise of all members of our society?" Crosby asks. **Paul M. Rowe**

* *Women Scientists and Engineers Employed in Industry: Why So Few?* is available for \$29 plus \$4 shipping (\$.50 for each additional copy) from the National Academy Press, 2101 Constitution Ave., NW, Washington, DC 20418, Tel.: 202-334-3313. Or, order by phone toll free (from outside the Washington, DC, area) at 1-800-624-6242.

Paul Rowe is a free-lance science writer based in Washington, DC.

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Her appointment "represents a very important appointment for science in general and for social and behavioral science particularly," said Lonnie Sherrod, Vice President of the William T. Grant Foundation. Sherrod, who worked with Petersen at the MacArthur Foundation, described Petersen's research as "innovative and pioneering in both its conceptualization and method."

"Her work has broken down disciplinary barriers and reached hard-to-study populations," said Sherrod, adding that she "has tackled some of the most difficult problems in current topics in social science research. That background combined with her administrative skills, is a perfect combination to bring to that job" at NSF.

Sherrod believes that Peterson's developmental psychology research background will serve NSF well. "It's

important to have someone who has studied children and youth and developmental processes in this key role at a time when we have an Administration in place that is concerned for future generations."

Breaking More Barriers

Petersen will be the first woman to hold either of the top two management posts at the Foundation in its 44-year history. She is the second psychologist to be tapped for the deputy slot. The first was APS William James Fellow Richard Atkinson, who went on to become NSF's director in the late 1970s and is now Chancellor of the University of California-San Diego.

Petersen's appointment comes on the heels of several other significant changes for psychology at NSF. As many readers already know, two years ago NSF established a separate directorate for behavioral and social science research. But, it should be noted, this was done only after NSF could no longer ignore the mounting

pressure from APS and others in the science community, and Congress.

Also contributing to the atmosphere of change for psychology at NSF are the arrival of Leslie Zebrowitz as program officer for social psychology, and the arrival of Merry Bullock, who is filling in as program officer for cognitive psychology for long-time NSF staffer Joseph Young, now on sabbatical at The Johns Hopkins University.

The Post-Cold War Era

Petersen will be playing an important role in shaping federal science policy in the post-Cold War era. While she will be representing all disciplines at the highest levels of the federal science establishment, she reportedly is optimistic that her presence will mean greater visibility for psychological science.

SEE PETERSEN ON PAGE 35

SCIENCE FROM PAGE 6

On a "golden era" for psychology:

When I checked on the psychologists specifically a few years ago, I found out that proportional to their funding, they were doing just as well as other sciences. The problem was that they were comparing it to the golden era when psychology was publishing more in *Science*. But since that time, [there are] at least two new journals that didn't exist.

See, psychologists were a little like the biologists who originally sent to *Nature* and *Science*. They didn't have any journals of their own. For psychologists, *Science* was the place to publish. Now they have a couple of other journals. One of them is yours—*Psychological Science*. So you have to allow for that....

On beating the bushes for articles:

[As Koshland mentioned earlier, *Science* previously engaged in a successful "campaign" to encourage more articles

from the physical sciences. The strategy involved featuring the field in the journal's lead articles and asking senior scientists to direct the "really hot stuff" from their younger colleagues toward *Science*.] Of course, you have ups and downs. A very distinguished member of my board is at Bell Telephone labs where they publish a lot on good solid-state physics. He said we'd turned down three articles [sent at his encouragement] and 'What the hell is going on?' I looked into it and [my staff] were right. They were not the best articles. He said, 'Well, they were accepted in *Nature*.' I said, 'Well, you look at the articles in *Nature* and look at the articles they sent us.' They sent their best ones to *Nature* and their second-best to us. And we wouldn't take them. Then they started sending their best articles to us and we took them and he's very happy. So that's really what has to happen.

On doing it for scientific psychology:

It's got to be judged statistically. [People

in the field] have got to try it and be willing to face [the risk of rejection].... If everybody could gauge exactly what is *Science* material, we'd have a one-to-one: Everything we receive would be accepted.... Nevertheless, if they start sending things in reasonable quantities, [and if they make the first cut], then they have a pretty good chance, one in two or one in three, of getting it in....

[People also] will say that getting an article in *Science* is very prestigious. People complain to me that they didn't get tenure because we turned down one of their articles. On the other hand they say, "I have this very good stuff. If I send it to the *Journal of Biological Chemistry*, I'm sure it is going to get in. If I send it to *Science*, it may or may not get in, so I have to weigh [that] against the higher prestige value...."

I think everybody does that kind of mental calculation. I don't blame people for doing that, but I would like to have more social science in the journal.... ♦

Development of Anti-Addiction Medications

New IOM report recommends establishment of multidisciplinary research centers and higher funding priority for NIDA

In a report released March 17, the Institute of Medicine (IOM) recommends the establishment of multidisciplinary research centers by the Medications Development Division of the National Institute on Drug Abuse (NIDA) to "coordinate all aspects of drug abuse research, treatment, and education." Subject to congressional appropriations, they would have as their purpose "interdisciplinary research relating to drug abuse and other biomedical, behavioral, and social issues relating to drug abuse." The report, *Development of Anti-Addiction Medications: Issues for the Government and Private Sector*, was produced by a 14-member National Research Council Committee to Study Medication Development and Research at the National Institute on Drug Abuse. Among the committee members was APS Fellow Alice M. Young, a professor of psychology at Wayne State University. Members had expertise in behavioral pharmacology, drug treatment, neuroscience, drug development, health-care economics, clinical research, and federal regulatory law.

Claiming that pharmacotherapy has received "far too little attention" since the development of methadone some 30 years ago and, more recently, naltrexone and levo-alpha-acetylmethadol, the report calls for reinvigoration of federal

efforts to coordinate with the basic science community, federal regulators, and industry in order to bring more marketable agents into drug abuse treatment. The first of two reports to be issued by the IOM committee, this report examined the climate for development of anti-addiction medications. The second report will "develop policy and legislative proposals intended to stimulate private involvement" by overcoming some of the disincentives identified in the present report.

The IOM report recommends that NIDA foster basic research in several areas, including the "behavioral bases" of chronic drug addiction. The proposed centers would conduct both basic and clinical research in areas including "drug abuse prevention, training, information, and community service and outreach." The report also urges further support of research to "develop laboratory models of behavioral characteristics of the addictive process."

To obtain a copy of *Development of Anti-Addiction Medications: Issues for the Government and Private Sector*, contact the Div. of Biobehavioral Sciences and Mental Disorders, Institute of Medicine, 2101 Constitution Ave., NW, Washington, DC 20418.

TEMPERAMENT FROM PAGE 7

fear states than the left. Right-sided stroke patients say they feel less anxiety, while greater anxiety is commonly seen with left-sided lesions.

The amygdala's functional specificity, at least for cats, has been shown to be exquisite. In one series of experiments, two groups of cats—one aggressive and the other timid, with respect to attacking other animals—were implanted with electrodes in the limbic system. Firing rates in the amygdala were not different between the two groups during response to various noises. One exception, though, were firing rates in response to sounds associated with the presence of a threat. Further, in the latter case, evoked potentials in the, immediately adjacent hypothalamus did not show any difference between the "cocky" and "scaredy" cats.

Heritability of Temperament

Whatever the mechanism by which neurochemicals modulate temperament, temperament's heritability itself was further elucidated by two other papers presented at the session. In separate studies, Rowe of the University of Arizona and H. Hill Goldsmith, a professor of psychology at the University of Wisconsin-Madison, found temperament to be substantially determined by genetics, particularly negative traits such as fearfulness, anxiousness, and hyperactiv-

ity—which appeared to be primarily genetic.

In a study of several hundred 5-12 year-olds from ethnically and socioeconomically diverse families, Rowe uncovered concordant rates of anxiety and hyperactivity (as reported by mothers) among twins, siblings, half siblings, and cousins. The concordance was primarily in the direction of their degree of genetic relatedness (i.e., .5 for siblings, .25 for half siblings, and .125 for cousins). "Genetic variation explained the majority of the variation in the two temperamental traits, with the heritability of anxiety calculated at .87 and hyperactivity at .75," Rowe explained. "Nonshared environmental effects accounted for the remainder of the variation—12 percent for anxiety and 20 percent for hyperactivity." As examples of nonshared environmental effects he cited, among other factors, birth complications, in utero exposure to drugs, or an experience with a teacher. Shared environment effects were trivial, at 1 percent for anxiety and 5 percent for hyperactivity.

Family

The study, which was unusual in not being confined primarily to middle-class subjects, Rowe said, allowed him and his co-author to calculate whether education, ethnic background, or marital status changed the contributions of genetic and environmental input into temperament. It appeared they did not.

"The family is not a crucible that can mold anxiousness and hyperactivity," Rowe concluded. Even if children were all raised in middle class circumstances, he said, the full range of temperaments would still be expressed.

In his ongoing study, Goldsmith is taking what he called an unusual focus—the genetic influence on the timing of behavioral development. There may or may not be concordance between twins for certain traits, depending on when the assessment is made, he suspects. In this and other studies in the planning, he also will inject into the investigative mix EEG variables, cortisol levels, and autonomic reactivity. **Sheila Stavish**

Sheila Stavish is a free-lance science writer based in San Francisco.

PETERSEN FROM PAGE 33

This is echoed by psychologist Jacquelynne Eccles, a member of the NSF Advisory Committee for the Social, Behavioral and Economic Sciences, who views Petersen's appointment as "especially timely," adding that recent events "all speak to the growing commitment of NSF to the behavioral and social sciences."

Eccles, currently at the Institute for Social Research at the University of

Michigan, also sees implications for NSF's effort to expand the Human Capital Initiative (HCI), a behavioral science research agenda originally developed by dozens of organizations under the auspices of APS. "I am hopeful," she said, "that NSF, having made these positive moves, will now follow through and extend the commitment to the HCI being proposed by the new directorate by committing adequate funds to this effort." ♦

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