



# OBSERVER

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## APS to Showcase the Teaching of Psychology

The improvement of the teaching of psychology now has been officially "moved up" on the priority list of APS activities. Beginning in 1994, the APS Annual Convention will feature a new teaching institute as part of its pre-meeting program. And, beginning this month, APS has become a co-sponsor of the National Institute on the Teaching of Psychology (NITOP), held each January in St. Petersburg Beach, Florida. A longtime interest of APS members and the APS Board, contributing to the enhancement of the teaching of psychology has now taken a prominent place in APS's mission of serving scientific and applied psychology.

### January Conference Receives APS Support

The annual NITOP is the largest and most well-known forum for teachers of psychology. This four-day "teachathon" routinely draws a sellout attendance of teachers—primarily from two- and four-year colleges, high schools, and universities—to learn about successful and interesting teaching techniques, content, "apparatus," and ap-

proaches as well as innovative course syllabi.

Long a source of inspiration and practical knowledge for the liberal arts college teacher, the Institute was co-sponsored in its 15th year by APS. Continuing sponsors include the originator of the Institute, the University of Illinois at Urbana-Champaign, and the University of South Florida. This year's conference was held January 2-5.

Participants (maximum 300 allowed) at the Institute are traditionally treated to presentations by the nation's premiere teachers of psychology who have expertise in the classroom and who are accom-

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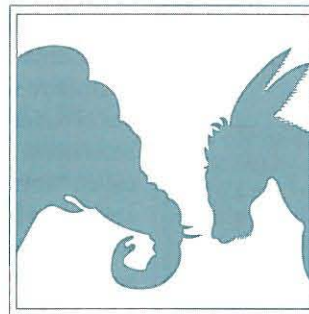
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## The "New" Washington And Psychology

The election dust has settled. New Members of Congress are in place and the federal departments are getting fresh leadership, at least at the higher levels. The major question here at APS headquarters is: **Is all this good for psychological science? AND THE**



**ANSWER IS ...** (drum roll, please) **not clear yet** (now, you knew that), but here are some of the background issues that need to be considered in trying to figure it out.

**Out with the Old; In with the Old**  
Maybe the biggest surprise in post-election Washington is that the face of the new Congress isn't nearly as unfamiliar as the pundits had predicted. Yes, there are 120 new members in both the House and Senate, but only 28 incumbents were defeated, and the typical new member is an experienced local or

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<i>Staff Writer</i>	Don Kent

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Tel: 202-783-2077, Fax: 202-783-2083  
Email (Bitnet): LHERRING@APS  
Internet: LHERRING@BITNIC.EDUCOM.EDU

# The Brain in the Machine

Congressman George E. Brown, Jr.  
*Chairman*

*House Science, Space, and Technology Committee*



In July 1989, the Congress of the United States passed a resolution designating the 1990s as the "Decade of the Brain." While such a resolution has largely ceremonial significance, it also testifies to a heightened awareness by politicians of the serious nature of mental disorders and disabilities, and to the promise and expectation that these disorders can be overcome through advances in science and technology made by federally funded researchers.

And well it should. A recent report by the congressional Office of Technology Assessment<sup>1</sup> (OTA), which included APS Executive Director Alan Kraut on its advisory panel, indicates that the cost of mental disorders in the United States exceeds \$130 billion per year, almost half of which is attributable to lost productivity. Based on this estimate, OTA concludes that "during the 1980s the relative investment in research on mental disorders was considerably less than that for other diseases" such as cancer and heart disease.

And that's the *good* news. Funding for psychological research into mental disorders exceeds that of most other areas of social science. For example, while the National Institutes of Health received over \$110 million in federal support for psychology in 1992, the National Science Foundation (NSF) budget for all behavioral and cognitive sciences was merely \$22 million. This represents about 1% of NSF's total research budget. Less than \$13 million was available for research on language, cognition, and social behavior. Another \$4 million was devoted to decision, risk and management science.

Although the establishment of a Directorate for Social, Behavioral and Economic Sciences at NSF [see November 1991 *Observer*] should help focus attention on the importance of psychological research, this development comes at a time when advocates of most other scientific disciplines also are actively seeking increased government support. At the same time, significant growth in the federal discretionary budget is unlikely in the near future, and no research discipline will soon receive major funding increases unless it is judged to be a particular national priority, tightly linked to short- and medium-term national goals. Behavioral science in particular suffers under these conditions, because its federal funding base eroded by about 25% during the 1970s and 1980s, while funding for other disciplines increased an average of 30% over this same period.

Why hasn't growth in funding for behavioral and social sciences been commensurate with other disciplines? Inadequate investment reflects a number of factors. For research into mental health, perhaps most significant has been the propensity of our society to stigmatize those who suffer from mental disorders, and to exclude such disorders from our broader portfolio of national health research priorities. But low investment in behavioral and social sciences overall appears to reflect a cultural bias against the so-called "soft" sciences, which strive to reveal the allegedly intangible and non-quantifiable essences of human nature, rather than to provide knowledge and tools to control the world that surrounds us. (The origins of this bias no doubt have been explored by social scientists.) It is illuminating to recall that Vannevar Bush, who articulated the science policy principles which led to the creation of NSF, was "an opponent of the social sciences."<sup>2</sup> Ironically, it was the demand for social scientists to evaluate NSF programs in the 1950s that ultimately justified the need for, and utility of, social science research.<sup>3</sup>

The allocation of research funds during the "Decade of the Brain"—about 90% of

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# Grappling with Violence

## *National Research Council Issues New Report on Violence Research*

Which individuals have a high potential for violence? What individual, biological, family, peer, school, and community factors influence the development of that violence potential? How can we detect this potential in children and later in life, to prevent acts of violence?

These are only a few of the questions explored in a massive report, *Understanding and Preventing Violence*, just published by the National Research Council (NRC), the research arm of the National Academy of Sciences. The report is the product of a panel of 6 psychologists and 14 other scientists, mainly criminologists, sociologists, and criminal justice authorities.

Commissioned by the Centers for Disease Control, the National Science Foundation, and the National Institute of Justice, it is hailed as the broadest and most comprehensive study of violence yet to appear in America, integrating the various perspectives of diverse disciplines in order to fix a bead on one of America's most intractable problems.

The NRC report doesn't have all or even very many of the answers to the question of why American society is far and away the most violent in the Western world, with a rough estimate of 6 million victims of violent crime each year, 23,000 of them murder victims. The report doesn't name a magic bullet, though it does suggest some ways in which American society might be made safer.

Essentially, the 464-page NRC study points to glaring gaps in knowledge about violence. It advocates a wide array of research on violence-related subjects that scientists seemingly have neglected until now or that government has failed to fund.

### Statistical Data

What is *not* known about violence starts right with the most basic national numbers. Statistics on violence are highly inadequate, not only because acts of

violence may be vastly under-reported, as in rape, or over-implicated, as in some robberies, but essentially because current U.S. crime statistics do not categorize crimes by violence.

"Everyone would agree that murder is a violent crime," says Gregory Carey, an APS Charter Member who is assistant professor of psychology at the University of Colorado-Boulder and a faculty fellow of the Institute of Behavioral Genetics there. Carey was on the NRC panel and was responsible for issues concerning the genetics of behavior.

### What Is Violence?

"But the violence aspect may be more subtle," Carey said. "For example, a robbery where the assailant has his hand stuck in his pocket pretending he has a gun, but where there is very little physical threat to the victim, is treated statistically in the same way as a robbery where the gun is out there cocked and in the victim's gut."

Carey points out that violence is highly multifactorial. "Chances are that when we try to ameliorate the situation by manipulating one, two, or three different variables, the result of those manipulations will have only a modest effect on the outcome.

### Be Flexible

"What we have to do is become an experimenting society and try out a lot of different mechanisms to reduce violence. We can't expect that any one of them will be the magic key to reduce it. Maybe we will have to use combinations of different interventions," Carey said. Causes of violence differ quite a bit from, say, a case of spouse abuse to a man attacking staff in a psychiatric ward, Carey contended. "Violence is multifactorial in its causes and also in terms of its manifestations," he noted.

Also on the NRC panel was APS Charter Member Leonard Eron of the University of Wisconsin and currently at the University of Michigan. Eron said, "There are so many things that go into determining whether a person is going to act violently at a given point in time—it's impossible to study all the factors simultaneously, but that's what we need."

But Eron disagrees with the notion that little is known about the roots of violence, an impression one might get from a rapid reading of the NRC report. He cites effective work that he and APS members Nancy Guerra and Rowell Huesmann are doing in inner-city schools of Chicago and its Aurora suburb. Studying second to fifth graders at risk of developing aggres-

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## Call for Nominations

Editor, *Psychological Science*

The Publications Committee of the American Psychological Society (Sam Glucksberg, Chair; Judy DeLoache; Robert Krauss; Lynn Nadel) invites nominations for Editor of the Society's flagship journal, *Psychological Science*, to succeed the current editor, William K. Estes, whose term will end in December 1994. Nominees must be members of APS and should be prepared to begin receiving manuscripts early in 1994 for publication in 1995. To nominate candidates, please provide a brief statement in support of the nominee. Self-nominations are encouraged, as are nominations of members of underrepresented groups in psychology. Nominees are encouraged to briefly discuss their ideas on future directions for the Journal. Nominations should be sent by March 1, 1993 to Sam Glucksberg, Chair, APS Publications Committee, American Psychological Society, 1010 Vermont Ave., NW, Suite 1100, Washington, DC 20005-4907. For electronic mail, Bitnet APS@APS or Internet APS@BITNIC.EDUCOM.EDU



# Commission to NSF: "You're doing just fine."

WASHINGTON, DC—It appears the future course of the National Science Foundation (NSF) will remain relatively on track—for now anyway—with little deviation from its fundamental mission of basic research and science education.

After 90 days of intense soul searching involving three public meetings, many private meetings with the academic community, and digesting hundreds of comments and letters, the Commission on the Future of the NSF issued its findings: NSF should continue to use its budget to fund primarily basic (rather than applied) research; NSF overall is doing a fine job with its limited resources; however, NSF could improve upon a few things, particularly informing the public of the importance of research funded by NSF.

It all began with language contained in the NSF Senate appropriations bill (for FY 1993) suggesting ways in which NSF should focus more on helping strengthen

economic competitiveness by working more closely with other government agencies and industry. The appropriations bill also directed NSF to submit a report by December 15 to the Senate Appropriations Committee, indicating how NSF intended to incorporate the Committee's suggestions into its 1993 NSF operating plan. Walter Massey, Director of NSF, then issued a memo to the National Science Board [the governing board of NSF] encouraging more research exchange between various disciplines and a broadening of their missions. To allay the immediate concerns of academia, which saw this as a threat to basic research, Massey appointed a special 15-member commission of leading representatives from academia and business to examine the desired future role of NSF.

The Commission was co-chaired by Bill Danforth, Chancellor of Washington University, and Robert Galvin, Chair of

Motorola, Inc. In their report, they emphasized the importance of NSF continuing its current focus on basic research but recommended academia work more closely with industry. The Commission also suggested that NSF improve research accountability by awarding grants that ultimately address broader national problems and needs. In doing so, the Commission said a larger NSF budget will be needed and industry should help by contributing to the public funding of selected programs such as those involving engineering, technology, and certain sciences.

APS sent letters, along with copies of the APS-initiated **Human Capital Initiative** (HCI), to members of the Commission for their use in evaluating NSF's changing role in society and in planning long-range national priorities. The letter summarized the background of the HCI and stressed its relevance to NSF's mission.

In describing an example of how the HCI research agenda complements the purposes and goals of the Commission, the letter directed attention to one part of the agenda, *Productivity in the Workplace*, to demonstrate "how fundamental cognitive and psychological research contributes to our understanding of how people learn new skills and solve problems, what promotes attention in individuals, and how people interact with technology." Further, the *Productivity in the Workplace* component of the HCI (see November 1992 *Observer*) will be "crucial in addressing such diverse issues as improving air-traffic control systems, designing better computers and robots, and developing effective employee-training programs," according to the HCI document.

For now, basic science research within NSF seems safe, and scientists can take comfort in the Commission's warning that changing the current mission of NSF "would have little or no effect on the U.S. economic position in the near term but would severely restrict prospects for the long term." Whether that will satisfy the Senate Appropriations Committee that started this process is an open question. ♦

## NASA to Solicit Research Proposals For Neurolab Shuttle Mission

In April of 1993, NASA will issue an Announcement of Opportunity soliciting proposals for studies to be conducted on the Neurolab Space Shuttle Mission, scheduled to fly in 1998. Neurolab will be a two- to three-week mission devoted to brain and behavior research. This mission is a key element of NASA's contribution to the "Decade of the Brain," the national research effort to further the development of fundamental neuroscience and behavior research. The goals of the mission are to use the unique environment of space flight to study basic research questions and to increase the understanding of the mechanisms responsible for neurological and behavioral changes in space. In addition, Neurolab will further NASA Life Sciences goals in support of human space flight. The Announcement of Opportunity will describe the specific objectives of the mission and provide information concerning the submission, evaluation, selection, and implementation of proposals. To receive an Announcement of Opportunity send your name and address to:

Neurolab Program Scientist  
NASA Headquarters  
Code SBM  
300 E St., SW  
Washington, DC 20546  
Fax: 202-358-4168



## On the APS Trail . . .

*Keeping up with APS can be challenging, so here's a brief synopsis of some recent activities:*

The **Accreditation Steering Committee**, chaired by Marilyn Brewer, met in early January in Chicago, to continue drafting an alternative to the current accreditation system of evaluating doctoral programs in psychology. The seven-person committee originated from the 1992 Chicago Summit on Accreditation. Other members include Emanuel Donchin, Richard McFall, Virginia O'Leary, Donald Fowles, Elizabeth Holloway, and Steve Elliot ...

The newly formed **APS Fellowship Subcommittee** will evaluate applications for Fellow status and make recommendations to the APS Board. Prior to the subcommittee's establishment, most fellow applicants were either grandfathered into APS as fellows of other societies or were recommended for fellow status by the APS Membership Committee. The new subcommittee is comprised of the Chair, Lois Bloom; Mel Wilson; Robyn Dawes; Lila Braine; and William Hall ...

The **American Library Association's Educational and Behavioral Sciences Section of the Association of College and Research Libraries** received APS Executive Director Alan Kraut at its mid-winter meeting in Denver. In a discussion group, Kraut explained APS's history, achievements, and importance to the scientific community. Of special interest to the library audience was discussion of APS's growing publications portfolio, electronic publishing issues, librarians's role in disseminating psychological research results to scholars and the public ...

The **APS Student Caucus (APSSC)** held its fourth annual **winter Executive Council meeting** in Washington, DC, January 16-17. This is the first time Council members had seen the APS offices and visited APS staff. APS Executive Director Alan Kraut has attended all four of the Executive Council meetings ...

*Human Capital Initiative activities are progressing:*

Work begins on **Vitality for Life: Psychological Research for Productive Aging**, the second research initiative deriving from the APS-initiated **Human Capital Initiative**. Invitations were sent to behavioral science organizations in December to solicit participation in the effort to develop fundable research projects in the area of aging. Denise Park and John Cavanaugh will co-chair the drafting committee, and a drafting workshop will be held March 21-22, 1993. The initiative is being funded by the National Institute on Aging and NIMH ...

The September **Changing Nature of Work** workshop has spawned a first draft of its research initiatives document coordinated by co-chairs James G. Greeno and Virginia O'Leary. Soon the draft will be circulated for comments from an 11-member drafting committee, other workshop participants and societies ...

John Hagen and Charles A. Perfetti are organizing a small meeting to plan an initiative on **literacy and reading** to be funded by the National Institute of Child Health and Human Development. Celia Gershenson is collecting information for an initiative on other aspects of education and also on substance abuse. Rue L. Cromwell is organizing a planning meeting for an initiative on **mental health** to be funded by NIMH. The National Academy of Science's new report, *Understanding and Preventing Violence* (see article on page 3), is being examined as the basis for an initiative on **violence** ...

# AIDS Prevention Research And NIMH

## Support Among Physicians Is High for Behavioral Research

Is the National Institute of Mental Health (NIMH) just spinning wheels, or reinventing them, when it sponsors new research on AIDS prevention? After all, America could adapt and reuse many features of the French and Swiss prevention campaigns, with their very explicit and presumably highly effective posters and pamphlets.

That was the contention of a New England Medical Center Professor of Medicine and Pediatrics, Charles A. Dinarello, at a meeting of the National Institutes of Health (NIH) AIDS Program Advisory Committee in Bethesda, Maryland, in November.

Dinarello, a member of the NIH committee, darted the question at APS Member Ellen Stover, director of the NIMH Office of AIDS Programs, who was telling the AIDS advisory group about her office's broad range of AIDS prevention and behavioral change research. Those types of research constitute about half of the Office of AIDS Programs's \$79.5 million annual budget, Stover said.

### Why Support Behavioral AIDS and Sex Research?

Dinarello said it is "amazing" to see in Europe the subway station billboards and the material on television and in movie houses. "They have very effective programs for educating the very vulnerable," he said.

Dinarello pursued, "Instead of throwing money on your own behavior programs, what have you learned from European

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## APS Staff Additions ...

### Martha C. Tralka Joins APS Communications Office

APS welcomes Martha C. Tralka as its new Editorial Assistant. Martha will work primarily with the *Observer*, overseeing the employment ad section and providing valuable assistance in management and production aspects of the newsletter. She joined the APS staff on December 14 and comes to us from an association management firm in Baltimore, Maryland, where she was an editor, for more than four years, of publications in diverse fields such as the insurance industry, the temporary help industry, and other distributor-based associations.

Martha brings with her both editing proficiency and publishing expertise that will help maintain a "lean and nice" comportment in the APS Communications Office. A native of the Washington, DC, area, Martha said she is excited to return to this area from Baltimore. Having been responsible for an overwhelming diversity of organizations at the Baltimore association management firm, Martha said she is "looking forward to concentrating [her] efforts on APS publications. The *APS Observer* offers a challenge, and other publications and communications projects will keep me busy."

Martha received her BS from Towson State University in Mass Communications with a minor in English. She is currently working on her master of arts degree in Publications Design at the University of Baltimore. Her background in writing and design will be a useful addition to the APS staff. We look forward to her promising contribution to the APS team and mission.



### Anne Kwiatkowski Joins APS Convention and Membership Offices

APS also welcomes Anne Kwiatkowski as the new Convention/Membership Assistant. Since November, Anne has been working with Lauren Butler, Director of Conventions and Special Projects, on plans for APS's 5th Annual Convention. She also has been working closely with Sharon Hantman, Director of Membership, on updating this year's membership renewals and responding to inquiries by prospective members.

Anne previously worked as a conference coordinator at The Food and Drug Law Institute, a non-profit, membership association in Washington, DC. For nearly three years, she helped develop educational seminars which focused on new regulatory issues in the food and drug industries, such as the food nutrition labeling debate and the breast implant conflict.

A native New Yorker, Anne came to the DC area in 1986 to study psychology at The Catholic University of America. To supplement her classroom studies, Anne worked as a research assistant at the university's Human Performance Laboratory. Her work contributed to the study of differences in memory patterns of individuals having suffered closed-head injuries.

Having been named Outstanding Senior Psychology Major, Anne received her BA with honors in 1990. Her educational background and association experience will no doubt be an asset to APS.



## CONGRESS FROM PAGE 1

state legislator. This is "new" politics?

In the House, Democrats actually lost several seats while Republicans gained a few, but the total is not much different from the advantage the Democrats held in 1992. Democrats also stayed right where they were in the Senate, where they continue their same 57-43 majority.

### Women and Minority Gains

But what new faces there are in Congress are refreshingly more diverse, with women and minorities dramatically increasing their presence. The total number of women in the House went from 27 to 48 and in the Senate, from 2 to 6. In the House, blacks increased from 25 to 38, Hispanics from 11 to 16, and Asian-Americans from 3 to 5. Carol Moseley Braun (D-IL) is the first black woman elected to the Senate and former Representative Ben Nighthorse Campbell (D-CO), who is part American Indian, won a Senate seat. The only other minorities represented in the Senate are democratic Senators Daniel Inouye and Daniel Akaka, both from Hawaii and both Japanese-Americans.

Also adding to the new profile is psychologist Ted Strickland (D-OH), professor of counseling psychology at Shawnee State College.

### Big Changes in Big Bucks Committee

The House Appropriations Committee, which provides funding for federal research, has seen monumental changes in its makeup. Jamie Whitten's (D-MS) failing health forced him to relinquish his 42-year tenure as full committee chairman to William Natcher (D-KY), who also will retain his position as chairman of the Labor, Health and Human Services (HHS) and Education Subcommittee. Rep. Natcher, whose subcommittee oversees the National Institutes of Health (NIH), has been a strong supporter of biomedical and behavioral research. Rep. Joe Early (D-MA), also on the Labor, HHS and Education Subcommittee and a big fan of NIH, failed to win reelection to a tenth term. His seat is one of five on the Labor, HHS and Education Subcommittee that became open after the election. Only democratic appointments have been made

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## For the Teacher . . .

# How to Develop Multiple-Choice Tests

Lee Sechrest, John F. Kihlstrom, and  
Richard R. Bootzin  
*University of Arizona*

Sooner or later, almost everyone who teaches psychology has to develop a multiple-choice test. Many lower-level textbooks come with sets of questions distributed by the publishers, but those items do not cover unique lecture material. Moreover, even the published items ought to be carefully reviewed, for they may not be of uniformly high quality. And, many of them violate what might be considered standard rules for writing good items (Ellsworth, Dunnell, and Duell, 1990). In any case, beyond lower-level courses, teachers are likely to be mostly on their own with respect to developing multiple-choice tests. What is one to do?

### Start at the Beginning

Why give a test in the first place? The easy answer is, "Well, of course, we want to find out how much students have learned." The difficulty is we can't know how much students have learned without first having a pretest or baseline measure. We can't assume students have started at zero (or at any specific level greater than chance). Houston (1985) gave a set of test items from an introduction to psychology to a group of 60 diverse persons (aged 16-61) with no formal training in psychology, and this group exceeded chance performance on 76 percent of the items.

### Start at the End

The temptation is to propose a "final" exam at the *outset* of the course and to consider this baseline in evaluating performance on subsequent tests, but that's got its own set of problems. So, an alternative answer to the question "Why give a test...?" is that we at least

want to know how much the examinees know about psychology. In that case, we could identify some more or less critical knowledge—that students ought to have acquired—and determine how many actually did acquire that knowledge. That would involve the construction of a *criterion-referenced* test. That is, specify a criterion level that represents successful performance.

If you choose this approach, you are not much concerned about differences among students above or below the criterion level. For example, if teaching differential equations, you're not much interested in the fact that some inept students were more inept than others or that some students could do the problems faster—but no more correctly—than others. Or, if teaching psychology using the Keller (1968) method—in which all students are expected to reach criterion performance—there would be little interest in differences among students.

### Norm-referenced Tests

Usually, however, teachers construct exams to distinguish between students with different levels of knowledge—in other words, they create *norm-referenced* tests. They want to order students with respect to their knowledge, and to be able to say—for any level of performance—which students know more. That aim raises issues (i.e., reliability and homogeneity of sets of items) that are not inherent in criterion-referenced measures and that should affect how items are written and scored.

Reliability, in this context, refers to the dependability of conclusions about differences in ability inferred from test scores. Nearly everyone understands that on, let us say, a 60-item test, the difference between 42 correct and 43 correct is trivial. (That is why most instructors like to position the borderlines between letter

grades at points at which natural breaks in a distribution of scores occur. This minimizes the number of students whose letter grade is affected by a single answer.)

### Half Wrong, Half Right: Uncovering a Difference

In order for test scores to allow some ordering among test takers, items must be constructed to result in a distribution of scores. That is, the variance of the score distribution should be large. The maximum variance for any given item will occur when its difficulty level is .50 (i.e., when half the respondents get it correct and half get it wrong).

In general, differentiation among examinees on a test will be greatest when the difficulty level of the test causes subjects to get about half the items correct. Put another way, neither very difficult nor very easy items assist much in differentiating among examinees.

Ideally, each and every item in a test should "work," that is, help differentiate maximally among examinees. Teachers may try to vary item difficulty by writing some easy and some difficult items in the mistaken belief that these test results will better represent the knowledge distribution. But reduced variance contributes to reduced differentiation.

Even so, there are good reasons to include some easy and difficult items. Some teachers reason that including some easy and some difficult items may serve motivational purposes. Easy items may reduce anxiety about the exam and difficult items may reassure the best students that their knowledge is being fairly evaluated. Difficult items may also serve a diagnostic function for the instructor who may want to know whether a specific construct has been learned by the students who have best mastered the material.



### Difficulty Level and Fairness

Items with a difficulty level of .50 are not easy to write, and a test consisting only of such items may be somewhat demoralizing to students expecting to do better than 50 percent correct. Item variance is actually not much reduced unless the difficulty level is fairly extreme, say beyond .80. That is, if the correct/incorrect split on items is not worse than .80/.20 (or .20/.80), variance is not much reduced. For the sake of student morale, a test with a mean percentage correct of about 70 may be desirable.

Also, a test should be fair. Students do sometimes complain that a particular item is too detailed, ambiguous, or otherwise inappropriate. From a psychometric point of view there is a clear and objective index of fairness: the item-to-total correlation. An item belongs on a test if the correct response is positively correlated with scores on the remainder of the test. Most test-scoring software has the capacity to calculate these correlations. Of course, with a large  $N$  (such as that encountered in most introductory and survey courses) even very small correlations become statistically significant. A reasonable threshold for retaining an item might be that its item-to-total correlation should be at least .20 (for  $N = 100$ , this correlation is significant at  $p < .05$ ); items failing to meet that criterion then would be eliminated from the test (e.g., by scoring the item correct for all responses).

Students immediately grasp the idea behind this practice and appreciate the extra effort entailed in rescoring the test to ensure fairness. And when confronted with the fact that a particular item did in fact discriminate between high and low scorers on the test, their complaints are almost always withdrawn. This assumes, of course, that most of the items on the test are perceived as fair. It is unlikely, but possible, to construct entire tests in which the variability between students is due to irrelevant considerations rather than to knowledge about the course material. In those cases, item-to-total correlations are not helpful.

### Sources of Variance

Variance in test scores is determined in complex ways. Preferably, nearly all the variance should be determined by differences in knowledge at the time the test is given. In fact, however, the number and variety of determinants of variance will be large. Scores will vary because, among other reasons, some students: (1) are better and faster readers than others; (2) are test-wise (i.e., have learned heuristics to identify an answer that has a good chance of being right); (3) are smart enough or lucky enough to sit next to a better student from whose paper they may copy; (4) will have been lucky enough to have studied the exact material on which a few items are based; (5) will be relaxed and in a good frame of mind for taking the test, while others are anxious and distracted.

Instructors can fairly easily reduce some of these sources of variance (e.g., cheating, reading ability) but must accept other sources (e.g., luck in what was studied). Instructors should certainly construct items to minimize unwanted sources of variance. Correct response choices should, for example, be balanced across the options so that any position bias (e.g., the

inclination to choose the last alternative) should not be either an advantage or a disadvantage. Characteristics of response alternatives not reflecting particular content (e.g., length, format) should not be cues to correctness. Extraneous material and difficult vocabulary should be excluded from the stems and distractors of items so that reading ability is minimized as a source of variance.

### Research Basis of Item Construction

Advice about how to write multiple-choice items is not scarce. For example, a study of educational psychology textbooks found guidelines offered in 32 of 42 texts, and 12 of the guidelines were given in half or more of the 32 (Ellsworth, Dunnell, and Duell, 1990). Unfortunately, most of the advice is, apparently, just that—advice. Empirical support for many guidelines is lacking (Haladyna and Downing, 1989), but where it does exist, the support is usually thin, being limited to a study or two of dubious generalizability.

### A Summary

Nonetheless, a review of empirical support, combined in an informal Bayesian way with expert opinion, reported by Haladyna and Downing (1989), is useful. (For a more general summary of research and expert opinion, see McKeachie, 1986.) We summarize, and edit, to some extent, their recommendations here:

1. Consider using only three instead of the usual four or five options for questions. Item statistics are generally as good with three options as with four or five, and because time per item is reduced, the number of items and content covered can be increased. Very often, it is difficult to come up with three or more good distractors anyway.
2. Balance the key so that the correct answer appears approximately equally often in every position. Students who have a tendency to choose one alternative (e.g., the last one) whenever they are uncertain should be neither more nor less likely to be right across items than would be expected by chance.
3. Do not use "all of the above," "none of the above," and similar alternatives as possible answers. Such choices generally make items a bit more difficult but are not helpful in other ways, since they introduce additional response biases. Also, do not use "I do not know" as a response option; after all, arguably, in many cases this answer is literally correct.
4. Keep lengths of options fairly consistent within items (e.g., so that the correct response is not notably longer than the distractors), and avoid giving the answer away by grammatical construction of the item. For example:

- An episcotister is an
- (a) instrument
  - (b) computer software
  - (c) theoretical construct

SEE TESTS ON PAGE 22



# APS to Blow into Chicago in '93!

... And Here's Another Preview of the 93 Convention ...



The Program Committee has been working overtime to design an exciting program for the **5th Annual Convention, June 25-28, 1993, at the Sheraton Chicago Hotel & Towers**. As always, the APS Convention showcases the best of psychological science and reflects the remarkable breadth of the field in integrative sessions that transcend the boundaries of specialties. The latest additions to the program—9 invited addresses and 4 invited symposia—were carefully selected to offer you this winning combination of distinguished scholarship, cutting-edge topics, and diverse viewpoints.

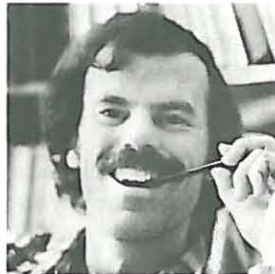
Here are 13 more good reasons to attend the 1993 APS Convention...

## INVITED ADDRESSES

**Martin S. Banks**, University of California-Berkeley

### *Visually Guided Navigation: How Do We Know Where We're Going?*

Humans move rapidly and safely through complex environments while avoiding stationary and moving obstacles (e.g., when driving vehicles or flying aircraft). The seemingly easy navigation belies underlying complexity of the task. J.J. Gibson showed that motion of the observer through a rigid visual scene produces characteristic patterns of motion on the retina (optic flow field). I will describe work on how people use the optic flow field to determine their direction of self-motion. While no obvious feature in the retinal image of the flow field corresponds to the direction of self-motion—when a person's motion is accompanied by an eye or head movement—people are still able to identify direction of motion accurately. The visual system seems to rely on an extra-retinal signal about eye position. Also, without confounding the part of the retina being stimulated with the type of flow field being presented, we found that most parts of the retina contribute significantly to the determination of direction of self-motion.



**Faye J. Crosby**, Northwestern University

### *Affirmative Action: A Rational Policy That Arouses Emotions*

After a review of some published work showing why the United States needs affirmative action programs, the presentation will concentrate on current work that addresses the question: What is it about the policy of affirmative action that elicits such divergent reactions in people, and what do our answers tell us about human reasoning?



**Carol S. Dweck**, Columbia University

### *Implicit Theories of the Self*

What is the relation between self-theories and motivation? And, how do self-theories with motivational consequences develop? I will begin with research on very young children's self-theories and show how they predict clear, coherent motivational patterns (both adaptive and maladaptive) that are relatively stable over years. I will discuss how these self-theories may change development but also examine the similarity of the early theories and patterns to those of older individuals for whom the self-theories begin to predict depression-like responses to setbacks. Antecedents of the self-theories and their allied patterns will be discussed.





## INVITED ADDRESSES

**Alice Eagly**, Purdue University

### *The Science and Politics of Comparing Women and Men*

Psychologists have long compared women and men in research data but now debate both the scientific value and political legitimacy of this endeavor. Scientific gains depend on the ability of psychologists to develop and rigorously test theories that account for differences and similarities. Political legitimacy depends on the ability of people to overcome biases that lead them to construe differences as disadvantageous for women.



**Paul E. Gold**, University of Virginia

### *Cognitive Enhancers in Animals And Humans: From Hormones to Brains*

Glucose and other pharmacological agents can promote the formation of new memories. On the basis of studies using direct brain injections, these treatments interact within and across neurotransmitter systems in several brain regions, including the medial septum and amygdala. Recent evidence, derived from findings obtained in rodents, indicates that glucose also enhances memory in humans, particularly in healthy elderly subjects and in patients with Alzheimer's Disease.



**Arie Kruglanski**, University of Maryland-College Park

### *Motivated Social Cognition: Need For Cognitive Closure Affects Information Processing and Social Interaction*

Theory and research will be described relating the need for cognitive closure to social information processing and interpersonal affect and behavior. The need for cognitive closure is a desire for clarity and certainty. It can be aroused when benefits of closure seem high (e.g., when action is required) or when costs of lacking closure seem high (e.g., under time pressure, fatigue or alcoholic intoxication—where lack of closure requires the unwanted expenditure of further cognitive effort). Evidence will be presented that the need for cognitive closure affects social psychological phenomena such as stereotyping, persuasion, and groups' reactions to deviants.



**Michael E. Lamb**, National Institute of Child Health and Human Development

### *The Origins and Correlates of Individual Differences in Behavioral Inhibition*

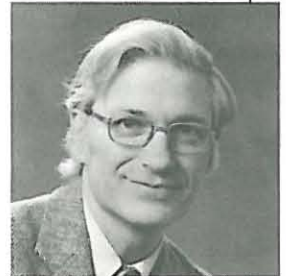
We have undertaken a longitudinal study to explore the origins, developmental course, and interrelations among individual differences in adrenocortical functioning, cardiac activity, emotional expressivity, social experience, perceived irritability and fearfulness as they predict emergent differences in behavioral inhibition. Our preliminary results raise questions about the appropriateness of viewing behavioral inhibition as an independent dimension. Instead, behavioral inhibition appears to be part of a constellation of interrelated negative emotional tendencies that are relatively stable from early in infancy.



**Robert Rescorla**, University of Pennsylvania

### *Associations in Instrumental Behavior: Nature and Persistence*

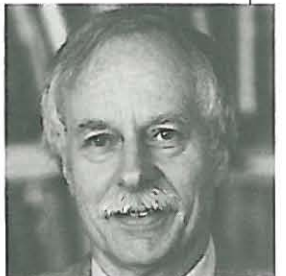
Recent analysis of instrumental behavior suggests the presence of associations among each of the three primary elements: stimulus, response, and outcome. Each association contributes to the acquisition of and maintenance of instrumental behavior. Moreover, once formed, each seems largely impervious to a variety of treatments intended to destroy it.



**Roger N. Shepard**, Stanford University

### *How the Mind Reflects the World*

Can there be psychological principles approaching the elegance and universality of physical laws? This talk argues for the existence of such principles as adaptations to universal regularities of the world in which all life evolves. Supportive evidence will be drawn from mental phenomena of generalization, spatial transformation, and color representation.



CONTINUED ON NEXT PAGE



## INVITED SYMPOSIA

**Shari Ellis**, Organizer  
Carnegie Mellon University

### Learning and Development in Cultural Context

This symposium will examine how a variety of cognitive skills including language, literacy, spatial thinking, and weaving are shaped by the nature of social relations, availability of cultural tools and artifacts, and the purposes of specific cognitive activities within sociocultural contexts. Other participants: Michael Tomasello, Mary Gauvain, Robert Serpell, and Patricia Greenfield.



**David J. Gubernick**, Organizer  
University of Wisconsin

### Proximate Causes of Parental Care in Mammals

The study of mechanisms is critical for understanding the evolution and proximate causation of parental care. We examine the sensory controls, hormonal and neurobiological mechanisms underlying maternal and paternal behavior primarily in rodents, and some hormonal correlates of parenthood in humans.

**Michael Maratsos**, Organizer  
University of Minnesota

### Development of Brain and Language Functions

This symposium presents new findings and analyses of the problems of brain and language relations, particularly the localization of language function in different parts of the brain. Also to be examined are the degree and nature of plasticity of different parts of the brain in taking over language functions.



**Sherry K. Schneider**, Organizer  
University of Arizona

### Issues in Work-group Diversity

The purpose of this symposium is to discuss the effects of diversity on group processes. Participants will address issues of influence, communication, productivity, and perceptions of fairness. The first three papers will describe effects of diversity in experimental settings; the last will examine diversity issues in intact work groups.

## Donations Sought for Student Travel Award Fund

As all APS members know, the annual convention offers our student affiliates a rare forum for presenting their research, exploring the vast array of work being done in the field, and networking with future colleagues. But, given the substantial costs involved in traveling to the convention, this valuable professional experience is too often an unaffordable luxury.

With your support, the APS Board of Directors and the APS Student Caucus plan to continue their commitment to provide travel funds to students requiring financial assistance to attend the annual convention. Over the past four years, these funds have allowed 95 student affiliates from over 60 institutions of higher learning to attend the annual convention and present their research.

**Once again, APS urges its members and students to make tax-deductible contributions to this cause.** Checks should be made payable to APS, and sent to: APS Student Travel Award Fund, 1010 Vermont Ave., NW, Suite 1100, Washington, DC 20005.

Travel funds will be made available to graduate and undergraduate student affiliates who will be presenting research at the convention, are willing to work at the convention, and can demonstrate financial need. The number of awards given will depend upon funds available, so please give generously.



## AIDS FROM PAGE 5

programs that you can duplicate? And why have we, to this day, no national education policy for high school students, with the very explicit demonstrations like the Europeans?" he asked Stover. "What are you learning on these programs that Europeans haven't already told you? ... I just don't understand why we have to duplicate [these studies] since the Europeans have already gone through this. Why haven't we got a [national] program in the United States, and what does your institute plan to do about it?"

### Education vs Research

Stover replied that NIMH faced restrictions the 1980s on "speaking frankly, speaking explicitly, directing programs in ways that are very targeted." There were "limitations on dissemination and delivery of very frank, clear messages on how to change behaviors," she said. And behavioral research was phased down, leaving significant gaps in NIMH's data base. While not mentioned by Stover, federal support for national surveys of sexual behavior was essentially outlawed during the Reagan-Bush administrations, so researchers were in the dark about up-to-date information on sexual practices that might contribute to the spread of AIDS.

Stover also stressed the difference between research and dissemination policy. She said NIMH develops knowledge that is turned over to other agencies that disseminate it.

The point was then taken up by others on the NIH AIDS Advisory Committee including Anthony S. Fauci, AIDS Research Director of NIH; Frederick Goodwin, NIMH Director, and June Osborn, Chair of the U.S. National Commission on AIDS.

Turning to Dinarello, Fauci said, "What you really are asking is: 'Because we as a nation have not been able to approach the problem of explicit education, does that mean that we shouldn't do behavioral research?' I think those are two things that can go on in a parallel track. The fact that there has been a great deal of reluctance in this country to be explicit in our educational programs ... , I don't see how that rules out the parallel track of doing behavioral research."

Fauci pointed out that the successful European programs have been education programs, not behavioral research programs. "I think we can learn a lot from the Europeans about ... explicitness." At the same time, he does not believe explicitness in education should come at the expense of behavioral research support. "...I don't see how that impacts negatively on the effort you would want to put into behavioral research," said Fauci.

### Common Sense and Counter-intuitive Data

NIMH Director Goodwin then warned against "mixing the issues of what we can learn from other countries" with questions of the value of behavioral research and whether it is a mere replication of what seems to be common sense. He said that behavioral studies in San Francisco revealed that "a lot of the things that were being taught as common sense just were not true—in fact, they are 180 degrees from what was found by research." For example, it might be common sense to believe that men getting HIV-negative test results would be ultra cautious to maintain that status—but many of them actually were found to increase their high-risk behavior from then on because, given

their high level of risky sexual behavior in the past, they thought the HIV-negative results showed they must be immune to AIDS, Goodwin said.

Osborn joined, "I think this is a peculiar place to have to point out that research is different from policy," then went on to say, "I think the entire putdown of behavioral science has to be dealt with rather firmly."

Turning to Dinarello, she said, "You seem to have a remarkable level of intuition. It is the history, however, of behavioral science, that many findings are counter-intuitive. And if you start disseminating something because it is intuitively correct but in fact is wrong, you have doubled your error."

### Cultural Considerations

Osborn, who is Dean of the University of Michigan School of Public Health, said that in her seven years of work on AIDS programs with the World Health Organization she had "been struck with how easy it is" to run effective AIDS programs in other countries where there are usually only one or two common cultures. "The thing that is distinctive about [the United States] is that there are hundreds of cultures, and the thing that is distinctive about this [AIDS] epidemic is that it so profoundly begs the question at the base of each culture that to oversimplify, to generalize, to assume that your intuition, however good, applies across a cultural barrier is to lose the war on this virus. And I think we've really got to get past this business and recognize that, just as it is intuitively correct, but totally wrong, [to believe] that if you get wet feet you get a cold, the same kind of thing crosses over to behavioral science. NIH, or some agency, needs to start investing more deeply....," said Osborn. Complaining that agency's such as NSF and NIH shun ownership of this cultural/behavioral problem, Osborn lamented that "we are loosing in the fight against the epidemic...."

### AIDS Prevention Intervention Programs

The AIDS-related programs that Stover described for the Committee included AIDS prevention trials with runaway adolescents in New York and San Francisco, felons on work-release in New York, gays in bars in many areas, and inner-city African-Americans and Hispanic persons. She also described a broad range of other psychosocial programs and studies that address children through adults.

Mentally ill persons also are a priority target population of the NIMH programs, Stover said, pointing out that "the range of seropositive prevalence in private psychiatric hospitals, for example, is somewhere between 5% and 8%." Stover added that "this rate is in *private* institutions."

She said more research is needed to specify the prevalence of HIV infection among the mentally ill. She said, "We are encouraging behavioral scientists to evaluate how well people with mental illness understand prevention messages, how they can best be taught to avoid high-risk behavior, and how they can protect themselves from infection. Effective methods for providing health services to severely mentally ill persons with HIV infection are also being explored," she said.

NIMH's multi-site, multi-population prevention trial programs are designed to serve as blueprints for AIDS prevention services of the Public Health Service, Stover said. ♦



## CONGRESS FROM PAGE 6

thus far and those new members are Nancy Pelosi (D-CA), Nita Lowey (D-NY), Jose Serrano (D-NY), and Rosa DeLauro (D-CT).

One of the biggest losses to the science community was the unexpected defeat of Rep. Bill Green (R-NY), who was a strong ally of the National Science Foundation (NSF) and was the ranking Republican on the appropriations subcommittee overseeing NSF. Bob Traxler (D-MI), previous chairman of the NSF subcommittee did not seek reelection. Both Traxler and Green fought hard to prevent Senate Appropriations Committee Chairman Robert Byrd (D-WV) from including more than 30 behavioral science research grants by title in a rescission bill that Congress passed in May (see July *Observer*).

Louis Stokes (D-OH), who also serves on the NIH subcommittee, will assume the new chairmanship. Stokes was instrumental in getting congressional support for the research initiative on normative development of ethnic minorities and the initiative on middle childhood development research, both of which were initiated by APS and the Society for Research in Child Development (SRCD). To date, new NSF subcommittee members chosen to replace outgoing ones are Reps. Ray Thornton, (D-AR) and Esteban Torres (D-CA).

Rep. George Brown (D-CA), Chairman of the House Science, Space and Technology Committee, managed to hold on to his seat by a comfortable lead despite earlier concerns by many. Scientists rallied to his support by raising campaign funds for his reelection. Rep. Brown, a staunch supporter of basic science research and peer review, played a key role in APS's efforts to establish the new behavioral and social science directorate within NSF (see November 1991 *Observer*). See page 2 of this issue of the *Observer* (**Presidential Column**) for Brown's observations on psychological science in public policy.

Sen. Ernest Hollings (D-SC), Chairman of the Senate Commerce, Science and Transportation Committee, and another friend to the science community, was reelected despite eleventh hour uncertainty. Sen. Barbara Mikulski (D-MD), who chairs the NSF appropriations subcommittee, easily won reelection. It was Sen. Mikulski who directed NSF to use the **Human Capital Initiative** in

planning its behavioral science research agenda.

### The Federal Agencies

Needless to say, there is much speculation around Washington regarding what a Clinton Administration will mean to science and to funding for basic research. Clinton made clear during the campaign his strong support for federal research and development to ensure a strong industrial recovery. Whether or not that is an indicator of a likely emphasis on applied research and technology at the expense of basic science research remains to be seen.

Much will depend on Clinton's choice to replace current presidential science advisor D. Allan Bromley. A few names are being mentioned at this point. One often mentioned is Mary Good, Allied-Signal Senior Vice President and former Chair of NSF's National Science Board. Another is John Gibbons, Director of the respected Office of Technology Assessment (OTA), Congress's think tank. (We have just learned that Gibbons has been named Presidential Science Advisor. In his former OTA role, he had overseen a great deal of social and behavioral science—a good sign.)

NSF Director Walter Massey, is widely thought likely to remain in his "non-political" post (a six-year appointment that isn't up until 1997), particularly since he has pushed for changing NSF's mission toward strengthening industrial research and technology.

Clinton's choice for Secretary of Health and Human Services is Donna Shalala, Chancellor of the University of Wisconsin-Madison. Shalala worked in the Department of Housing and Urban Development during the Carter Administration. Many rumors are circulating about who will be picked for Assistant Secretary of Health, but we're not telling.

### Who's In and Who's Out

As for whether NIH Director Bernadine Healy will stay in her job—it is anyone's guess, at least as of this writing. There are as many reasons being given for her staying on as for her leaving. She reportedly would like to stay and has past contacts with HHS Secretary Shalala. Whatever the outcome on Healy, we think she has been good for behavioral science at NIH and was one of the reasons APS

supported the move, effective last October, of the National Institute of Mental Health to NIH. Our hope is that her views on the importance of behavior have permanently affected the NIH bureaucracy.

Also rumored to be leaving and staying is Fred Goodwin, beleaguered Director of the National Institute of Mental Health. Goodwin was the Republican presidential appointee who headed the Alcohol, Drug Abuse, and Mental Health Administration from 1988 until a 1992 politically charged controversy over remarks he made (comparing violent behavior of inner-city males to primates in the jungle) forced his resignation and subsequent non-presidential appointment at NIMH. Since he is no longer a Republican appointee, he ordinarily would be safe in his NIMH position, but his Republican past and his role in causing federal defensiveness regarding violence research—that continues to prevent NIMH from directly addressing the issue—may have a new (or old) NIH Director asking him to leave, or at least to be moved to another position.

One other psychologically relevant federal position to mention is the now-vacant directorship of the National Institute on Drug Abuse. A pre-election search for a new Director had settled on four finalists, including APS nominee and psychologist Alan Leshner (current NIMH Deputy Director). Leshner had ranked first of the four at that time. But, will that position be filled anytime soon now that there are so many unknowns in the HHS hierarchy? Stay tuned.

### Kinder and Gentler, But No Richer

Regardless of who is chosen to play on the Clinton team, the harsh news is that scoring in terms of new dollars will continue to be low. The top priority of the new administration is going to be reducing the deficit and improving the economy. We think the tiny increase Congress most recently appropriated in funding for basic research is a precursor of things to come. Though the new administration and Congress may have their hearts in the right place, the pie is still the same size. But we also think that, with the importance the new administration has placed on investing in human capital, those who study human behavior will be getting their fair share of the helpings. ♦



## VIOLENCE FROM PAGE 3

sive behaviors, Eron and colleagues have found that such behaviors frequently are forerunners of adolescent and adult violence.

Eron and Jerome Kagan, of Harvard University, both brought developmental perspectives to the NRC panel, with Kagan emphasizing the sources of temperamental variation in children. Kagan is a developmental psychologist and an APS William James Fellow.



Leonard Eron

### Longitudinal Study Needed

Eron said, "One of our recommendations is that there be a long-term study of individuals starting at birth and another cohort starting at age 8, both going on for 12 years. The study would collect all kinds of information." Such a study would include data on birth difficulties, characteristics at birth, temperament, various biological and physiological measures, activity levels, parent-child relations, the kinds of communities the persons live in, kinds of television they watch, their play activities, their fantasy activities, and many other factors, taken annually across 12 years, Eron said.

"Following these two cohorts for some time we would then find out what their later behavior is like," Eron said. Eron believes federal funding agencies will look at the NRC report and be more apt to start funding such longitudinal research than they have in the past.

"It takes a long time for longitudinal research to pay off," Eron explained. "So the agencies haven't been too eager to fund them." But this may now change, he believes.

### Who's Interested?

Many legislators and others in policy-making positions will be very interested in at least reading the 27-page summary and recommendations at the beginning of *Understanding and Preventing Violence*, Eron believes, though he doesn't think

President Bill Clinton will be sitting up nights reading it.

Kagan is even more sanguine. He believes the study will have an impact on President Clinton. "I'm sure Clinton's advisors have told him everything that's in the report," Kagan said. Clinton is highly aware of many of the issues in it, Kagan believes, particularly the core facts about poverty and minority group membership as predictors of crime. "To decrease the gap in poverty, education, and dignity between those in our disadvantaged classes

and the middle class—that is what will get at the causes of crime," Kagan said.

"I really think Clinton will provide more funds, because I think he is aware of this problem and realizes how serious it is. Whether he will provide enough funds and whether the research community can be as imaginative and inventive as it has to be—those are the two questions," Kagan stated.

Kagan's own role in the NRC report is seen most visibly in the emphasis on temperament as a predictor of violence. He has been studying fearless children for about 15 years. He contributed to a section of the report that deals with neurological conditions and states implicated in violence.

### Integrated Perspective, Psychological Components

The overall psychological component of the report is best represented in a 46-page section titled "The Development of an Individual Potential for Violence." It begins with the basic statement "Biological, individual, family, peer, school, and community factors may influence the development of an individual potential for violence. Whether the potential becomes manifest as a violent act depends on the

interrelation between this violence potential and immediate situational factors, such as the consumption of alcohol and the presence of a victim."

Kagan pointed out that it was no easy matter to integrate the perspectives of the NRC panel's sociologists, criminologists, psychologists, and policy and criminal justice authorities in the NRC report, but that broad inclusiveness and integration is what makes the report unique and valuable, he said.

"Sociologists and criminologists want to emphasize the role of the external environment—bad conditions and opportunities for crime," Kagan said. "That's true. But most criminals do not commit violent crimes of rape, murder, and assault with intent to kill—so there you introduce the possibility that the violent people have had an unusual history of experiences over and above the fact that they grew up in a bad neighborhood with unemployed parents or have some special contribution of biology," Kagan said. These special differential areas are among those that concern psychologists, Kagan said.

### Historical Perspective

There has been a historical shift in the cadre of social scientists who study delinquency and criminality, Kagan noted. In the 1940s and 1950s it was mostly

psychologists who studied delinquents and criminals. Their constructs were psychological.

"What has happened since then—perhaps because crime has become more prevalent and because of the obvious association with neighborhoods of poverty and drug dealing—the sociological factors that predispose a child to crime have become more obvious. And that recognition has led to a change such that now the majority of scientists who study crime are sociologists, not psychologists. It's like an ecological niche where one species takes over the niche from the other.

"Criminologists tell us that the vast majority of people who are arrested for a crime probably will never commit another



Jerome Kagan

SEE VIOLENCE ON PAGE 21



**BROWN FROM PAGE 2**


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***Perhaps the cultural biases which have led to low levels of funding for the social sciences are rooted in the same traits that cause humanity to look toward technological, rather than behavioral, solutions to human suffering.***

REP. GEORGE BROWN

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***We have not yet adequately connected behavioral research to the much broader, and profoundly significant question of how human cultures develop and assimilate technology.***

REP. GEORGE BROWN

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which are devoted to the biology of brain processes—reflects a similar bias about the relative value of “hard” versus “soft” research. It appears that our ultimate ambition, as expressed in many articles and editorials in our leading science journals (as well as in the popular press) is to find the neurological and genetic sources not just of mental disabilities, but of “more vague and ill-defined responses such as aggressiveness, nationalism, bigotry, and sadism.”<sup>4</sup> Apparently, there is much comfort to be derived from viewing the brain as “just another organ,” subject to technological manipulation that ultimately may be able to rid the world of much suffering and unwanted behavior.

Yet such an approach is troubling. A philosophy of research on the brain that focuses primarily on neurological mitigation offers to liberate us from any obligation to address social, cultural or other environmental influences. Why worry about the causes of “anti-social” behavior, if we can develop a cure for them? If we discover a neurological cure for aggressiveness, must we address the societal problems, such as inner city poverty, that are associated with increased levels of violent behavior?

Such questions are not gratuitous. The history of technology development teaches us that humankind often uses innovation to mitigate the consequences of its own behavior.

Perhaps the cultural biases which have led to low levels of funding for the social sciences are rooted in the same traits that cause humanity to look toward technological, rather than behavioral, solutions to human suffering. In the past 50 years we have created an astonishing array of science-based technologies that could, in principle, solve most of the major problems facing humankind (e.g., hunger, overpopulation, degradation of the earth’s atmosphere, infant mortality, childhood diseases). Yet these problems persist, and in many areas of the world they grow worse. Apparently, technological solutions that fit seamlessly into our lives in the United States may be entirely inappropriate for adoption by other cultures.

Scientific knowledge and technological innovation are often developed in isolation from their societal context. The unwillingness of a culture or subculture to adopt a given innovation is too often viewed as a problem of human behavior or political institutions, not of the technology itself. In my view, however, the historical failure of our research system to adequately address broad issues such as women’s health and sustainable agriculture is a statement about our choice of research priorities and our faith in technology, not about the behavior of women and farmers.

I have long advocated the exploration of new mechanisms to link research and development to the achievement of social goals. The relative neglect of social sciences in our overall research portfolio may have compromised our ability to make these linkages stronger. We have not yet adequately connected behavioral research to the much broader, and profoundly significant question of how human cultures develop and assimilate technology. Similarly, social sciences have yet to play a major role in the design and coordination of multidisciplinary research programs aimed at national or global needs.

Can research in behavioral and cognitive science be used to inform and direct the national science and technology agenda, by helping us distinguish between solutions that are impractical, or even destructive, and those that are compatible with existing political and cultural institutions? In attempting to answer such questions, we must strive to break down the artificial and often false distinctions between “soft” and “hard” sciences. APS has gone to great lengths in developing the Human Capital Initiative which represents an excellent example of this kind of effort. In this process, the social sciences may well succeed in attracting more federal funds for research. The ultimate beneficiary could be humanity.

<sup>1</sup> Office of Technology Assessment, *The Biology of Mental Disorders*, OTA-BA-538 (Washington, DC: U.S. Government Printing Office, September, 1992)

<sup>2</sup> Kevles, Daniel J., 1977, “The National Science Foundation and the Debate over Postwar Research Policy, 1942-1945,” *Isis*, Vol. 68 (no. 241), pp. 5-26.

<sup>3</sup> Larsen, Otto N., 1992, *Milestones and Millstones: Social Science at the National Science Foundation, 1945-1991* (New Brunswick, Transaction Publishers), p. 39.

<sup>4</sup> Koshland, Daniel E., “The Dimensions of the Brain,” *Science*, Vol. 258, October 9, 1992, p. 199.



## TEACHING FROM PAGE 1

plished researchers. Founded by Frank Costin, Professor Emeritus at the University of Illinois, the teaching conference has grown steadily over the 15 years of its existence, and the institute also has spawned the development of numerous regional teaching conferences (e.g., the Mid-America Conference on the Teaching of Psychology held in Evansville at the University of Southern Indiana and founded by Joseph Palladino). The primary focus of the institutes is enhancing and broadening one's teaching skills and the exploration of new ideas.

### Supply and Demand

"There is a strong demand for teaching institutes," said Doug Bernstein of the University of Illinois and director of the Teaching Institute. "The numerous regional institutes that have sprouted up in the last few years are attracting capacity audiences around the country, and APS's entry into this important higher education activity will help meet the growing demand for valuable learning opportunities for teachers," said Bernstein in a recent telephone interview.

"With the recent surge of enthusiasm in improving undergraduate education and teaching, we're gratified that APS is participating as a co-sponsor of this year's Institute," said Joanne Fetzner, Institute coordinator. "It's a natural collaboration—APS and NITOP—between two organizations that share goals related to the improvement of education in psychology. And one major longterm goal of the cooperation between APS and the Teaching Institute is to reduce the registration cost of attending NITOP," said Fetzner.

Members of the Institute's Program Committee include Bernstein, Costin, Sandra S. Goss, and Robert Hendersen.

### Another Institute: Meeting Demand

Beginning in 1994, a new teaching institute will be developed to coincide with the annual APS convention. That first teaching conference will be scheduled to occur just prior to the APS convention at the 1994 meeting in Washington, DC. "An opportunity such as the development of a [teaching] institute so clearly beneficial to the psychological teaching commu-

nity is a must for APS," said APS Executive Director Alan Kraut. "The [APS] Board has been interested in this idea, actually, for some time now, and now we can take a major step to begin fulfilling this dream," said Kraut.

APS received its first formal proposal for such an institute as early as August 1990, Kraut explained. Sharon L. Armstrong, then at Drake University, had sent to the board an extensively detailed proposal modeled on that of the Linguistic Society of America summer teaching institute, and while the Board knew it was a good idea, there has not been until now an opportunity to pursue this idea and support it in an adequate fashion.

Armstrong, now at Central College in Pella, Iowa, stated in a recent interview,



"other sciences have benefitted tremendously from such teaching institutes. There are in the biological sciences, for example, three concurrent teaching institutes going on in different regions of the country every summer. This kind of service to help psychologists not only upgrade their ability to train but also to help them become better psychologists by being more informed about the field is an essential service." Armstrong emphasized that the obstacles to keeping up with psychology as a science are great, so she is pleased that "APS has begun an important step to address at least the teaching component of this service for academic psychologists housed primarily at undergraduate universities."

APS President Gordon Bower is pleased that APS is following through with involvement in teaching institutes and said in a recent interview, "The commitment of APS to high quality in

research and scholarship in psychology has always been paralleled by an equal commitment to excellence in the teaching of psychology at all levels. By improving the teaching of psychology, we improve the talent of the young minds attracted into our field.... To care about good teaching is to ensure the survival of our discipline and the vitality of our science."

### Learning from Experience

The experience APS gains as a co-sponsor of the 15th annual Florida Institute will bolster its ability to host effectively a separate institute. Both Bernstein and Fetzner will assist APS in developing a teaching institute scheduled to occur just prior to the 1994 APS convention in Washington, DC. Tapping the expertise of NITOP will be indispensable to APS's success in this adventure.

Commenting on the effect of NITOP, APS Board member Beth Loftus said of her experience as a speaker at a Teaching Institute in Florida a couple of years ago, "The enthusiasm in the talks, and in the audience, was contagious. A sense of pride at being a teacher of psychology pervaded the atmosphere." She was impressed by the diversity of the teachers that had come "from all over the country, to learn new ideas for improving teaching, and to share ideas that they had developed." As for APS's involvement in such an enterprise, Loftus said that "in this era in which the quality of science education is foremost on people's minds, the time is perfectly ripe for nurturing this type of institution."

APS Board member Sandra Scarr likewise is pleased with APS's venture into teaching institutes. "I like the idea of APS getting involved in the teaching of psychology; the APS founders always intended to have a strong teaching focus. The Teaching of Psychology Institute is a good way for APS to further the teaching mission and attract more members whose primary interests are in teaching," said Scarr.

As co-editor of APS's *Current Directions in Psychological Science* (CD) Scarr is no stranger to the mission of improving the teaching of psychology, since the journal was intended to be an important resource for teachers of psychology at its

SEE TEACHING ON PAGE 24



## Member Profile

# Peter Kaufmann Appointed Chief of Behavioral Medicine at Heart, Lung, and Blood Institute



Kaufmann

APS Charter Member Peter G. Kaufmann was appointed Chief of the Behavioral Medicine Branch (BMB), Division of Epidemiology and Clinical Applications, in the National Heart, Lung, and Blood Institute (NHLBI) in September 1992. He originally came to the Branch in 1983, after a decade of research in neurophysiology at Duke University.

Kaufmann's present interests include behavioral neuroscience and the clinical application of behavioral research to the detection and treatment of, and recovery from cardiovascular diseases. Through the Behavioral Medicine Branch, NHLBI has aggressively pursued a broad range of questions related to biopsychological and sociocultural factors in disease and has focused on disorders of the cardiovascular and pulmonary systems.

### Cardiovascular Disease and Behavior

In addition to administration of the well-known "research project grants," staff at the Behavioral Medicine Branch conduct their own research, usually in the form of clinical trials or other coordinated, multi-center studies. With the help of research findings which continue to support a strong role for behavior in cardiovascular diseases, the Branch's programs have grown to a budget of nearly \$30 million. "Every clinical trial initiated by the Institute includes behavioral considerations, such as evaluation of health quality of life," Kaufmann said.

"Staff of this Branch are often called upon to design the behavioral aspects of studies initiated by other components of the NHLBI. We work closely with physicians, epidemiologists, and other scientists to assure that opportunities for research on behavior are not lost. It makes good sense, since we can address questions of interest to behavioral scientists in a cost-effective way, while developing knowledge which improves understanding of health and disease."

Studies recently initiated by Kaufmann and his staff include a four-center clinical study, Psychophysiological Investigations of Myocardial Ischemia (PIMI), whose objective is to determine how psychological, neurological, and cardiological factors influence whether or not a coronary heart disease patient will experience angina during an episode of myocardial ischemia. "Silent myocardial ischemia is still a clinical puzzle. Although several hypotheses exist, no one really understands the mechanisms which determine whether heart disease will be accompanied by painful symptoms which warn patients of their condition," he said.

### Disciplinary Demands

"By working in a clinical setting, we can learn a lot about psychological aspects of heart disease, and how that psychology interacts with illness. The real challenge in this work is the requirement that studies entail a truly multi-disciplinary approach. Many of our studies demand expertise in medicine, psychology, psychophysiology, and the neurosciences," explained Kaufmann.

Results of the PIMI study are expected to illuminate how the interaction of physical and psychological demands on the heart influences the individual's physiology. The findings may have significance for treatments or prognoses.

### Raynaud's Syndrome

In November, 1992, the Branch broke new ground by funding a \$6 million coordinated clinical trial for Raynaud's Syndrome, which will include temperature biofeedback as one aspect of treatment. In 1988 or 1989, Kaufmann had noted with interest the work of Robert Freedman at Wayne State University, showing that biofeedback seems to be more effective than standard medical care for treating Raynaud's.

"The possibility that a behavioral intervention might be more effective than pharmacological treatment struck me as particularly interesting, because considerable earlier efforts exploring the application of behavioral interventions in hypertension resulted in mixed findings or only limited success. Few people thought behavioral interventions could become the primary treatment for hypertension, yet in the case of Raynaud's, the data suggested this approach might be viable, saving money and eliminating the unwanted side effects of drugs," he said.

### Historic Test of Behavioral Intervention

A chance to carefully test the applicability of behavioral interventions to Raynaud's Syndrome came with the Institute's 1991 approval of Kaufmann's proposed experimental design for a randomized clinical trial. "The launching of this study is historic not only because it provides an opportunity for a rigorous test of a behavioral, non-pharmacological intervention, but because it underlines the commitment this Institute has made to support behavioral research," said Kaufmann.



In the past, the NHLBI has provided funds for special research projects on topics such as neuroactive peptide mediation of stress impact in cardiovascular diseases, "cardiovascular hyper-reactivity," and behavioral interventions for hypertension. Other major projects being conducted by the Behavioral Medicine Branch include studies of psychological factors in coronary artery bypass graft patients, and methods to improve patient adherence to clinical trial interventions.

### The Future for Behavioral Research

As to the future of behavioral research at NIH? "Scientific knowledge, whether it involves behavioral or biomedical fields, is increasingly being viewed as a continuum. All fields have their own role to play, but there will never be a substitute for averting disease in the first place. Our success in doing so will depend, to a large extent, on our sophistication in the behavioral arena." For the immediate future, Kaufmann believes there are several important research questions on the horizon. For example: What types of clinical interventions will help improve survival of low socio-economic status heart patients? How can we help to control and eliminate smoking behavior? How do behavioral variables, which have been studied extensively in men, interact with the physiology of women? Are the neural systems responsible for regulation of the cardiovascular system fixed or are they capable of plasticity or modification by cognitive influences?

The range of research questions through which behavioral scientists can have an impact on health and health care is endless. "Our intention is to continue to seek out innovative research on fundamental as well as clinical questions addressing the relation between psychological factors and health. The Behavioral Medicine Branch and the National Heart, Lung, and Blood Institute have a history of leadership in the fields of behavioral medicine and health psychology. We intend to continue to be at the frontier," concluded Kaufmann.

### Kaufmann's Training

A graduate of Loyola University in Chicago, Kaufmann earned his doctorate in psychology in 1970 through the committee on biopsychology at the University of Chicago. "Chicago left a tremendous impression on me," he said. "It was here that I began to appreciate the complex nature of the scientific enterprise."

He continued his research training in the Department of Physiology and Pharmacology at Duke University, through the neurosciences training program. After three years in vision research, during which he characterized the pharmacological and visual field properties of cortical neurons in the cat and tree shrew, he turned to the study of one of the most intriguing of all neurological phenomena, the High Pressure Nervous Syndrome, or HPNS, a motor disorder experienced by non-diving mammals exposed to high pressures, such as that encountered in hyperbaric chambers or when diving to great depths in the ocean. The appearance of HPNS is one of the factors which defines the limits of open-ocean diving by humans. ♦

### VIOLENCE FROM PAGE 17

crime again, or maybe one more," Kagan said. "The number of recidivists—the criminologists' word for repeating criminals—is very small. But three-quarters of the crimes are committed by the small number of recidivists. So if you look at the large number of people who commit one or two crimes, yes, that may be associated primarily with poverty, neighborhoods, drugs, broken families and failure in school, so that can be considered sociological."

But Kagan asks, how does one explain the difference between the violent recidivist brought up in highly similar settings to that of the boy next door who never commits a crime? Finding an answer to that is eminently psychological, he believes, a major task for psychological science. ♦

*Understanding and Preventing Violence* can be ordered for \$49.95 plus \$4 shipping charges from the National Academy Press, 2101 Constitution Avenue, NW, Box 285, Washington, DC 20055 or by calling 1-800-624-6242 or (within the Washington, DC, area: 202-334-3313).

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## TESTS FROM PAGE 10

5. Try to use only plausible distractors and avoid distractors that contain clues that might be used by test-wise examinees. Ideally, for classroom tests, distractors should be diagnostic in the sense that incorrect answers should reveal specific deficits in knowledge or lapses in thinking. For example:

A dog hears a tone immediately before a puff of air is presented to the cornea of its eye. The puff of air is the:

- (a) conditioned stimulus
- (b) distal stimulus
- (c) unconditioned stimulus
- (d) generalization stimulus

An implausible distractor should attract very few responses, and thus represents a nonfunctional response option. Distractors including such adverbs as “never” and “always” tend to be avoided by test-wise students, when they are uncertain, and such distractors tend to produce biased patterns of responding that may favor one group of respondents over another. That is, the final score distribution will have an unwanted component of variance that is systematic but unrelated to knowledge of the material.

### Distractors

The purpose of distractors is to reduce the probability that a student can get the correct answer to a question by guessing. For that to happen, distractors must attract a reasonable share of responses. An implausible or nonsense distractor, in effect, changes the difficulty level of an item. For example, in a four-choice item, the chance level of difficulty for the item is .25. But if one of the distractors is a throw-away, the chance level for the item becomes .33. That does not necessarily hurt either the reliability or the validity of the test, but it does change how you interpret how much students have learned.

Our personal experience suggests that tests should begin with three or four fairly easy items so that anxious students are not “paralyzed” immediately by difficult material. Other than that, ordering test items more or less in the sequence in which the material was presented in books and lectures seems to help students do better (Balch, 1989). To the extent that such an order effect is constant across students, it has no effect on variance, and, hence, on differentiating between students. It may, however, put students more at ease, particularly if the test is difficult.

### Reduction of Irrelevant Variance

To reduce variance associated with individual differences in test-wiseness, as opposed to competence in the course, we also suggest informing all students, at the outset of the exam, of useful test-taking strategies. These include: (1) reading the test all the way through before answering any items (because one item may give hints about another); (2) trying to eliminate at least one option as clearly wrong (thereby increasing the likelihood of getting the item right by chance); (3) reasoning to the correct answer (when fact retrieval fails) from some general concept or principle (assuming that the instructor has not nefariously asked a question about an exception that tests the rule); and (4) guessing (when all else fails), because in the absence of explicit memory, implicit memory for studied material is likely to bias responding

toward the correct answer. Instructors probably should not offer the disclaimer proposed by the public-radio humorist Michael Feldman: “All questions have been carefully researched, though the answers have not; ambiguous, misleading, and poorly worded questions are par for the course.”

### True or False?

Very often the idea to be tested by an item may lend itself better to a true-false than a multiple-choice format. For one thing, it may be difficult to come up with three or four good distractors. Besides, if the distractors are poor ones, the item may be inadvertently converted to a two-choice item (i.e., the equivalent of a true-false item). For example, the item: Who first formulated the concept of correlation:

- (a) Karl Marx
- (b) Ronald Fisher
- (c) Francis Galton
- (d) Sigmund Freud

would for informed students be a two-choice item that could be rephrased as “Ronald Fisher first formulated the concept of correlation: true or false?” If the answer is false, then the correct answer to the item must be Galton.

There is nothing wrong with true-false items; in fact, they result in tests with about the same psychometric properties as multiple-choice tests. True-false tests are likely to produce higher overall scores since chance-level performance is .5. What probably is not a good idea is mixing multiple-choice and true-false items in the same section of a test. Mixing item types tends to produce response errors that have nothing to do with what students know. Multiple-choice and true-false items used in the same test probably should be separated into two sections, preferably with answer sheets marked in such a way that the student cannot put a mark in a wrong space.

### Objections to Multiple-Choice Tests?

The usual objection to multiple-choice tests is that they reflect only rather low-level memory processes rather than the higher-order concepts deemed “really important.” However, there is no reason why multiple-choice tests cannot tap fairly abstract, conceptual knowledge. Consider the following item: The fundamental process in classical conditioning is:

- (a) association by contiguity
- (b) vicarious reinforcement
- (c) association by contingency
- (d) continuous reinforcement

Now consider the following alternative:

In a classical conditioning experiment, a tone CS is paired with an electric shock US. For Group A, the CS precedes the US by 10 seconds. For Group B, the CS and US are presented simultaneously. For Group C, the US precedes the CS by 10 seconds. After 20 conditioning trials, the experimenter measures the magnitude of the fear CR. The most likely ordering of the CR magnitudes is:

- (a)  $B > C = A$
- (b)  $B > A > C$
- (c)  $A > B > C$
- (d)  $A = C > B$



Arguably, a student who gets the alternative item correct has a fairly good conceptual understanding of classical conditioning, at the level appropriate for Introductory Psychology.

If items designed to measure higher-order concepts correlate highly with items depending more clearly on memory (e.g., Ferland, Dorval, and Levasseur, 1987), is that an indictment of multiple-choice tests? Not necessarily, for the results suggest just as strongly that memory functions are related to those involved in higher order cognitive processes. Amazingly, after years of multiple-choice testing, we still do not have a very good notion of just what functions are tapped by such tests. In the meantime, we rely on the widely shared observation that it is unusual to find a student who does well on a multiple-choice test who is at the same time incapable of displaying other forms of comprehension of the course material.

Of course, this is an empirical question begging to be investigated. In general, we encourage teachers to experiment with tests. What exactly *is* the correlation between multiple-choice, short-answer, and essay tests of the same material? Does performance on items drawn from the text correlate with performance on items drawn from lectures? If a test is factor-analyzed, will the resulting structure mirror the organization of the course? When an instructor relocates to another institution, it may be useful for him or her to repeat readings, lectures, and exams from the previous year and to measure differences in student performance. This may yield useful clues about differences in the student populations being served.

Finally, tests are intended to evaluate, and promote, the learning process. Students should be encouraged to do more than score their tests against a key, count up the number correct, and slink away. Rather, they should be encouraged to treat the exam itself as a learning experience—to try to determine mastery of the course material. Instructors should consider preparing detailed feedback on their exams, perhaps short essays indicating what the question was about, why the right answer was right, and the wrong answers wrong. And, of course, similar considerations apply to the instructor. If students consistently do poorly on items testing particular concepts or principles, then the text or lecture material is a candidate for revision.

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## TEACHING FROM PAGE 19

inception. "I think APS has a lot to offer college teachers of psychology, not only in the meetings but in the journals. CD is tailor-made for teaching—not only does it help teachers of psychology keep abreast of the whole field with *brief* reviews written by experts, but these articles are so readable they have successfully been utilized by undergraduate students in coursework. Together, the Teaching Institute and CD—not to mention the annual convention and APS's flagship journal, *Psychological Science*—will help APS serve the needs of teachers very well," concluded Scarr.

Armstrong believes that the ideal would be for psychologists to make teaching institutes a continuing and integral part of their training, both during and after graduate school. Such an early involvement would also reduce any stigma associated with attending an institute to learn about areas in which one is deficient. "We simply must facilitate psychologists's keeping abreast of the field and improving their teaching. And, ideally, if people begin attending the teaching institutes as graduate students, such attendance becomes a very beneficial habit for life," she said. ♦

## Relocating?

Be sure to notify the  
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# APS Invites New Fellows

## Fellow Status Criteria

(effective 7/1/92)

The basic criterion considered for Fellow status in the American Psychological Society is that of sustained outstanding contributions to the science of psychology. Candidates will generally be considered after ten years of outstanding postdoctoral contribution, though exceptional cases of candidates with fewer years will be considered.

### NOMINATIONS

Individual APS members may make nominations any time during the year. Nominators must supply the following documents to the APS Membership Committee.

- (1) A letter of nomination specifying why the candidate is judged to have made sustained outstanding contributions. Self-nomination is appropriate.
- (2) The candidate's current curriculum vita.
- (3) Letters of support from three outstanding contributors to the field of scientific psychology familiar with the nominee's work, one of whom **must** be an APS Fellow.

### REVIEW AND APPROVAL OF NOMINATIONS

The APS Membership Committee has appointed a Fellows Subcommittee consisting of a Chair and four other APS Fellows (representing diverse specialty areas) to consider the nominees for whom letters and vitae have been received. The Subcommittee's voting on Fellow status may be made during a meeting at an annual convention, on a conference call, or by mail ballot. The Chair of the Membership Committee will coordinate all evaluations, recommendations, and voting. The APS Board of Directors will be notified of nominees approved for Fellow status.

### FELLOWSHIP APPLICATION

I would like to nominate \_\_\_\_\_ (please print or type) for APS Fellow status. In support of this nomination I have enclosed the following documents:

- ◆ Letter of nomination
- ◆ Curriculum vita of nominee
- ◆ Supporting letters from three colleagues, at least one of whom is an APS Fellow

I hope that the APS Fellow Subcommittee looks favorably upon my nomination of this worthy colleague.

Sincerely,

\_\_\_\_\_  
(signature)

\_\_\_\_\_  
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# APS Members In the News . . .

The news media in recent weeks has featured interviews with, or mentioned, several APS members on various research-related topics. The members are listed here along with their affiliation, the name of the publication/broadcast in which they were quoted/mentioned, and a brief description of the topic. The list is merely a sampling of the media coverage of members.

The *Observer* editor welcomes readers to submit such news item summaries for publication in future issues of this column. Send a copy of the original published story. Or, in the case of TV/radio broadcasts, send a description of the program, broadcast station name, its broadcast origin (city/state), interviewee and his/her affiliation, and time and date of the broadcast. Include your own phone number and postal or email address as well.

**Ronald Baenninger**, Temple University, *The Washington Post, Science*, Nov. 9, 1992, *The Los Angeles Times*, Nov. 18, 1992: Scientific study of yawning

**Jay Belsky**, Pennsylvania State University, *The New York Times*, Nov. 12, 1992: Parental division of labor in raising children; *The New York Times*, Dec. 24, 1992: Teaching cautiousness to children without imparting fear

**Gordon M. Burghardt**, University of Tennessee-Knoxville, *The New York Times, Science Times*, Oct. 20, 1992: Play as a vital activity that helps brain development in young animals

**Sheldon Cohen**, Carnegie Mellon University, *The New York Times, Science Times*, Dec. 15, 1992: Stress and social networks in relation to health and immune system functioning

**Linda Dunlap**, Marist College, *The New York Times*, Dec. 24, 1992: Teaching cautiousness to children without imparting fear

**David Geary**, University of Missouri-Columbia, *Kansas City Star*, Nov. 29, 1992: Math ability and the role of language in Chinese vs American children; *The Washington Post*, Dec. 7, 1992: Math education

**Sharon Golub**, College of New Rochelle-New York, *Mademoiselle*, Jan. 1993: Premenstrual syndrome

**Judith Hall**, Northeastern University-Boston, *The Washington Post*, Dec. 14, 1992: Touching behavior in social contexts

**Carollee Howes**, University of California-Los Angeles, *The New York Times*, Dec. 24, 1992: Teaching cautiousness to children without imparting fear

**Alan G. Kraut**, American Psychological Society, *The Washington Post/Health*, Nov. 24, 1992: AIDS in the workplace

**Joy Osofsky**, Louisiana State University Medical School, *Chicago Tribune*, Sept. 17, 1992: Violence and its effect on children

**Charlotte Patterson**, University of Virginia, *The Washington Post*, Dec. 20, 1992, and Cable News Network, Dec. 28, 1992: Children of gay couples

**Vilayanur S. Ramachandran**, University of California-San Diego, *The New York Times, Science Times*, Nov. 10, 1992: Missing limbs and associated changes in the brain

**Martin Seligman**, University of Pennsylvania, *The New York Times*, Dec. 8, 1992: Depression

**Bonnie L. Simon**, The State Developmental Research Institutes in affiliation with the University of California-Irvine, *Los Angeles Times*, Nov. 22, 1992: Developmental outcome of children born to and raised by young adolescent mothers

**Larry Squire**, University of California-San Diego, *The New York Times, Medical Science*, Nov. 3, 1992: Sleep and dream deprivation

**Paula Tallal**, Rutgers University, *USA Today*, Oct. 30, 1992: Sensory processing delay and learning disorders

**Bruce Thompson**, Texas A&M University, *USA Today*, Dec. 22, 1992: Scientific study of love

**Frank Willis**, University of Missouri-Kansas City, *The Washington Post*, Dec. 14, 1992: Touching behavior in social contexts



# People

## Recent Promotions, Appointments . . .

APS Charter Fellow **Clifford Attkisson**, Professor of Psychology at the University of California-San Francisco, was appointed **Dean of Graduate Studies and Associate Vice Chancellor for Student Academic Affairs** at UCSF, effective November 1, 1992.



His new position combines responsibility for graduate education at UCSF with administration of student academic services, including the offices of Admissions and Registrar, Financial Aid, Student Academic Services, and Services to International Students and Scholars.

Prior to his appointment Attkisson served as the Interim Dean of the Graduate Division. Among current UCSF appointments, he is Professor in Residence in the Department of Psychiatry, School of Medicine; Director of the NIMH-funded Clinical Services Research Training Program; and Director of the NIMH-funded Summer Research Training Program for Minority Undergraduates. Attkisson received his PhD in 1970 from the University of Tennessee-Knoxville.

APS Charter Fellow **Julien M. Christensen** was honored by the Human Factors Society (HFS) with the **President's Distinguished Service Award** in October, 1992.

Christensen, chief scientist at UES, Inc., in Dayton, Ohio, received the award at the 36th annual meeting of the Society in Atlanta, Georgia, in recognition of his outstanding contributions to the advancement of the human factors profession and the Human Factors Society.

Christensen's career has included 28 years with the Air Force Aerospace Medical Research Laboratory, 18 of those as director of the Human Engineering Division. Since his retirement from federal government in 1974, he has been professor and chair of the Department of Industrial Engineering and Operations Research at Wayne State University, held various positions with General Physics Corporation and UES, Inc., and served as a consultant to both government and industry. He has served many roles within the Human Factors Society, including two terms as president.

Christensen received both his master's and PhD degrees from Ohio State University. He considers himself fortunate to have had as graduate advisers the late Arthur W. Melton, the learning theorist; Robert J. Wherry, the statistician; and Paul M. Fitts, considered by many to be the father of human factors in the United States. Among his more than 130 technical publications are papers on Arctic aerial navigation which reside in the World Exploration Archives of the American Heritage Center. He was also accepted for membership in the Explorers Club of New York City for his contributions to

Arctic aerial navigation. He has received both the U.S. Air Force's Decoration for Exceptional Civilian Service and the Air Force Association's Citation of Honor.

APS member **Mitch Handelsman**, associate professor of psychology at the University of Colorado-Denver, has been selected as the **state winner in the 1992 CASE** (Council for the Advancement and Support of Education) **Professor of the Year program**. The winners—one undergraduate professor from each state, as well as a national recipient—were chosen from a pool of 434. The Professor of the Year program salutes the outstanding undergraduate instructors in the country—those who excel as teachers and influence the lives and careers of their students. It is recognized as one of the most prestigious awards honoring professors.



Handelsman received his PhD and master's degrees in clinical psychology from the University of Kansas. He came to CU-Denver in 1982.

APS Charter Member and social psychologist **Michael J. Strube**, Washington University-Missouri, was recently promoted to **full professor**. Strube received his MS and PhD from the University of Utah. Among numerous other memberships and honors, he is a member of the American Association for the Advancement of Science and the Society for Experimental Social Psychology. Strube's editorial roles have included service as Associate Editor (1987-1990) of the *Personality and Social Psychology Bulletin* and as Consulting Editor of the *Journal of Social Behavior and Personality* (1985-1989), the *Journal of Personality and Social Psychology* (**Personality Processes and Individual Differences**, 1987-1992) and the *Journal of Consulting and Clinical Psychology* (1988-1990). Much of Strube's NIH-supported research has focused on Type A behavior in relation to personal control, and objective measurement of lower back pain in patients.

APS Charter Member **Jane A. Steinberg** was appointed Deputy Director of the Division of Clinical and Treatment Research at the National Institute of Mental Health (NIMH). Formerly the Staff Director of the U.S. Interdepartmental Task Force on Homelessness and Severe Mental Illness, Steinberg was intimately involved in NIMH's 1992 report, *Outcasts on Main Street: Report of the Federal Task Force on Homelessness and Severe Mental Illness* (see July 1992 *Observer*), which outlines a national strategy to eradicate homelessness among people with severe mental illness. In her new position, she will oversee the NIMH extramural research portfolio related to understanding the etiology, psychopathology, and treatment of mental disorder.



# The Student Notebook

Dianna Newbern - Editor

## Introductions continue...

In the November 1992 issue we introduced most of the APSSC Executive Council Members and Special Officers. In this second and final phase of introductions to the APSSC Council and Officers is background information on two individuals not introduced in November. These two students represent both ends of the APS student continuum, graduate and undergraduate.

### APSSC Past-President

**Carolyn Roecker:** Carolyn is in a clinical program at the University of Iowa with special interests in adolescence and family conflict. Carolyn is preparing for an internship and plans to teach and continue research in an academic setting.

Carolyn says APSSC is very important to her for at least two reasons. First, she appreciates the scientific approach to psychology emphasized by APS. Second, being a part of the caucus at a time when it is growing and developing as a student organization has allowed her to feel that her contributions are meaningful and have made a difference. All of us who have served under her leadership can confirm her contributions through her dedication and follow-through.

### Undergraduate Advocate

**Ephraim Fischer:** Ephraim attends Touro College in New York City and has begun his academic life as a student member of APS. He is majoring in psychology and plans to obtain a clinical degree in a graduate program. He wants to blend that education with his present studies on the Jewish Talmud at Yeshiva University. Ephraim, too, joined APS because of its. You may remember that Touro won the Recruitment Contest last year and was awarded a \$500 prize. Ephraim was instrumental in starting that chapter and recruiting new members.

Together, Carolyn and Ephraim epitomize the APS partnership with students through the entire range of higher education. One has moved through her student life with APS as companion, and the other is just beginning that same process. Both are energetic individuals, willing to perform the work that will make a difference to APS student members. One has gained the experiences awaiting the other.

## Convention Travel Assistance Available

The APS Annual Convention offers student affiliates a rare opportunity to present research, learn of the vast array of work being done in the field, and interact with colleagues. But, the

substantial cost of traveling to the annual convention makes the journey an unaffordable one for many students. The APS Student Travel Award Fund, established by the APS Board of Directors and administered by the APSSC, provides limited financial assistance to many students who wish to attend this important educational and professional event.

As in past years, travel funds are available to graduate and undergraduate student affiliates who will be presenting research and are willing to volunteer (e.g., registration, job bank) at the convention, and who can demonstrate financial need. Typically, an award consists either of \$100 cash or free hotel accommodations. The number of awards will depend on funds available.

To apply for travel funds: 1) Send a letter of application (one page maximum) indicating your purpose for attending the convention, whether or not you are willing to work at the convention, and a travel budget. In addition, include your name, status in school (year), institution, home address, and telephone number. 2) Send a copy of the abstract that was submitted and accepted by APS. You must be an APS student affiliate to apply—nonmembers are ineligible for travel funds. **Send applications by May 1, 1993, to:** Aki Caramanos, c/o American Psychological Society, 1010 Vermont Ave., NW, Suite 1100, Washington, DC 20005-4907.

## Call for Psi Chi Poster Proposals for 1993 APS Convention

Psi Chi members are invited to submit poster proposals for presentation at the APS Fifth Annual Convention. There are two possibilities: (a) regular APS poster proposals (see the *Call for Proposals*, September 1992 *Observer*); mail to APS in Washington, DC, by January 8; and (b) proposals for the special portion of the program that APS has reserved for a Psi Chi Student Poster Session; mail to the Psi Chi-APS Program Committee in San Diego by February 6 (see address below).

Psi Chi members are encouraged to submit their proposals to the regular APS session when appropriate. Psi Chi students who submit their proposals for the regular session and want a second review for the Psi Chi student session should write "PSI CHI" in large red letters in the upper right-hand corner of both the APS *Proposal Cover Sheet* and the *Participant Information: Poster form*. If you submit a proposal for the regular APS poster session, DO NOT submit the same proposal for the Psi Chi session. Complete information can be obtained by contacting: Marilyn Borges, Psi Chi Western Regional Vice-President, Dept. of Psychology, San Diego State Univ., San Diego, CA 92182-0350, Tel. (619) 594-5404, email: mborges@sunstroke.sdsu.edu.



# A Guide to the Academic Job Search

(This is the second in a multi-part series that will discuss some of the ins and outs of launching a search for an academic position.)

## Part Two: Crafting Your Application Letter of Interest

You've been pouring over the *APS Observer Employment Bulletin*, the *APA Monitor*, and *The Chronicle of Higher Education*. And you've found several job ads that look perfect for you. NOW what do you do?

The typical application package to a college or university contains a copy of your vita, reprints or other samples of your professional writing, copies of teaching evaluations, and a cover letter, or "letter of interest." Next to your vita, your letter of interest is perhaps the most important document in your application package. It serves as a personal introduction to the "presentation" that your application materials make to the hiring committee.

Even if a letter of application is not specifically requested, it should be included as a matter of professional courtesy, and as a prologue to your application materials. Your letter of interest is your chance to show off your unique strengths and experiences. It is your opportunity to "sell" yourself to the hiring committee, and to show the committee how well you fit the department's needs.

Letters of interest should be relatively brief and written in typical business-letter format. Use your university's letterhead if it is available. Otherwise, type or print your letter neatly on high-quality paper. Remember, this is the first document that your potential employer will read with your name on it. Make that first impression the best that you possibly can.

Address your letter to the individual indicated as the contact in the advertisement to which you are responding. Sometimes, academic job ads ask you to direct your correspondence to "The Search Committee," or something similar. Under these circumstances, address your letter as directed, but be careful not to make any assumptions about your readers—for example, do not begin your letter with the salutation "Dear Sirs." An acceptable salutation is "Dear Search Committee."

## Start Strong

An interesting, original, and informative first sentence is most likely to hold your reader's attention, and to assure that s/he will continue to read your letter. The first paragraph of your letter, then, is the most important. In it, the tone is set for the rest of the letter. This paragraph should tell the reader why you are writing, and it should begin to tell the reader why you believe you are the best candidate for the job.

SEE STUDENT NOTEBOOK  
ON PAGE 31

## NETTALK ...

The 'net' is an electronic mail system created for students. In the last weeks, conversations have included topics such as research and job opportunities; quantitative problems and answers; developmental issues; attribution theory; the National Science Board report on the future of the National Science Foundation; and graduate schools. You can subscribe to the system at no cost and participate in discussions with other students. To subscribe, you need access to a mainframe computer account that is connected to Bitnet or Internet. Then, send the following message to `LISTSERV@MCGILL1.BITNET: ADD APSSCNET YourUserIDCode YourFirstName YourLastName YourInstitution`. (If yours is a Bitnet link, you don't need the ".BITNET" in the address to which you send the "ADD" or "SUBSCRIBE" command.) You will receive information about the network and introductory details. Join us on nettalk soon!

## APSSC Officers ♦ 1992-1993

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

### Executive Council

#### President

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

#### Graduate Advocate

Kenn White  
Institute for Child Study  
University of Maryland  
3102 Quartet Lane  
Silver Spring, MD 20904 Tel.: 301-890-8669  
Email: KWHITE@WAM.UMD.EDU

#### Undergraduate Advocate (Resources)

Ephraim Fischer (Touro College)  
1002 Avenue K  
Brooklyn, NY 11230 Tel.: 718-951-1183

#### Student Notebook Editor

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

#### Secretary

Kathleen Morgan  
Department of Psychology  
Wheaton College  
Norton, MA 02766 Tel.: 508-285-7722, ext. 483  
Bitnet: KMORGAN@WHEATNMA

#### Treasurer

Paul J. Reber  
Department of Psychology  
Carnegie-Mellon University  
Pittsburgh, PA 15217 Tel.: 412-268-8113  
Email: REBER@CMU.EDU

#### Past-President

Carolyn Roecker  
Department of Psychology  
University of Iowa  
Iowa City, IA 52246 Tel.: 319-338-9817  
Bitnet: BLACYRWY@UIAMVS

### Special Officers and Committee Chairs

#### Student Chapter Recruitment

Kimberly Delemos  
Department of Psychology  
CB #3270, Davie Hall  
University of North Carolina-Chapel Hill  
Chapel Hill, NC 27599 Tel.: 919-942-0794  
Bitnet: UKIM@UNC

#### Membership Conversion

Steve Fiore  
Department of Psychology/601 LRDC  
University of Pittsburgh  
Pittsburgh, PA 15260

#### Travel Awards/Volunteers

Aki Caramanos  
Department of Psychology  
McGill University  
Montreal, Quebec H3A 1B1 Canada  
Email: AKI@HEBB.PSYCH.MCGILL.CA

#### Chapter Co-chair/Psi Chi Liaison

Bill Dockett  
6325 N. Bridgehampton  
New Orleans, LA 70126 Tel.: 504-246-3569



# Organizational Profile

# Behavioral Genetics Association

## ORIGINS AND PURPOSE

The Behavior Genetics Association was founded in 1971 by an international group of scientists from a variety of fields including psychology, biology, psychiatry, and sociology. Its creation was in response to the lack of opportunities for regular communication and interaction across the interdisciplinary boundaries in the study of the genetics of behavior. The Association was established to promote scientific study of the interrelationship of genetic mechanisms and human and animal behavior through sponsorship of scientific meetings, publications, and communications among and by members; to encourage the education and training of research workers in the field of behavior genetics; and to aid in the dissemination and interpretation to the general public of knowledge concerning the interrelationship of genetics and behavior, and its implications for health, human development, and education.

## MEMBERSHIP

The Association has 461 active members from 25 countries. Application for Regular membership by those engaged in teaching or research related to behavior genetics requires sponsorship by a member acquainted with the applicant's work. A student in good standing at a recognized college or university can become an Associate member with the endorsement of a Regular member. Emeritus membership is granted to retired members. All members receive a subscription to the Association's journal, *Behavior Genetics*. Annual dues are \$45 for Regular members and \$25 for Associate and Emeritus members. Membership information is available from George Vogler, Secretary.

The "Organizational Profile," a fairly regular feature of the *APS Observer*, informs the research community about organizations devoted primarily 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.

## OFFICERS

David A. Blizard, *President*  
Pennsylvania State University

George P. Vogler, *Secretary*  
Washington University School of  
Medicine

Thomas J. Bouchard, Jr., *President Elect*  
University of Minnesota

Laura A. Baker, *Treasurer*  
University of Southern California

Lindon J. Eaves, *Past President*  
Medical College of Virginia

## MEMBERS AT LARGE

Peter Driscoll  
ETH-Zentrum, Zurich

Joanne M. Meyer  
Medical College of  
Virginia

Tamara J. Phillips  
Portland Veterans  
Administration Medical Center

Editor of *Behavior Genetics*  
David W. Fulker  
University of Colorado

## BACKGROUND

Behavior genetics has historical roots with Darwin, Galton, and Mendel. Individual behavioral and biological scientists applied the advancing principles of genetics, statistics, and behavioral science to the study of individual differences throughout the first half of the twentieth century. It was only in 1960, when Fuller and Thompson published a monograph, *Behavior Genetics*, that the field emerged as a distinct discipline. A flurry of activity in the late 1960s and early 1970s resulted in the founding of the Institute for Behavioral Genetics at the University of Colorado, the establishment of the journal *Behavior Genetics*, and the creation of the Behavior Genetics Association. These activities reflected the commitment of behavior geneticists to encourage the highest scientific standards for behavior genetics research and teaching, and to foster effective communication of important findings free of the misrepresentations and misinterpretations that occasionally occur in the context of a "nature-nurture" debate.

Enormous advances in biotechnology and computing technology over the past two decades have stimulated a marked increase in both the quantity and sophistication of behavior genetics research. New techniques in molecular genetics provide new directions and vitality to behavior genetics which will carry us well into the next century.

## ANNUAL MEETING

The July 1992 meeting in Boulder, Colorado, was attended by 207 registrants. There were 155 individual and symposia presentations. The 1993 meeting will be held on July 13-16 in Sydney, Australia, and the 1994 meeting will be held in Barcelona, Spain.

## Contacts:

David A. Blizard  
President  
Center for Developmental and Health  
Genetics  
College of Health and Human Development  
The Pennsylvania State University  
University Park, PA 16802  
Tel: 814-865-1717  
Fax: 814-863-4768

George P. Vogler  
Secretary  
Division of Biostatistics  
Washington University School of Medicine  
Box 8067, 660 S. Euclid Ave.  
St. Louis, MO 63110  
Tel: 314-362-3642  
Fax: 314-362-2693  
e-mail: george@wubios.wustl.edu



## STUDENT NOTEBOOK FROM PAGE 29

Write in a strong and assertive, but not arrogant, voice. For example, consider the following two lead sentences in a letter of interest accompanying an application for a social psychology position at mythical State College:

**Lead sentence #1:** I am writing to indicate my interest in the position that you are currently advertising for an assistant professor of psychology with expertise in social psychology.

**Lead sentence #2:** I have a strong background in social and experimental psychology, and I believe myself to be an excellent candidate for the position you are presently advertising.

Which sentence makes *you* want to read more?

Feel free to be creative, but keep in mind your readers and what they will be looking for in your application. In other words, resist the temptation to be flamboyant. At the same time, don't be hesitant and apologetic. As in a personal statement to a graduate program or for a fellowship, speak in a manner that is compelling, and honest.

### The Body of the Letter

The remaining few paragraphs of your letter should point out particularly relevant aspects of your vita in which the hiring committee might be interested. In these paragraphs, you may wish to elaborate on some of the details in your vita. Briefly stress your most appropriate talents or skills. Remember you are explaining why you believe that you are the best candidate for the job. Career counselor Adele Lewis explains that all too frequently, letters of application describe why the candidate is interested in the job. Rather, she advises an emphasis on why the institution should be interested in *you*. For example, writing "I believe that State College can offer me the quality of students and the professional opportunities that I seek" is not going to convince the hiring committee to call you for an interview. However, speaking directly to how you meet the needs of State College, as indicated in the job ad,

might do so. Describe your two years' work as the department statistics consultant and Psychology Lab Teaching Assistant. Point out how that provides you with the experience needed to manage State College's Social Psychology Laboratory. Discuss how you have involved undergraduates in your work. In other words, tell them how *you* are the person described in the ad.

### Teaching Requirements/Interests

If the job advertisement specifically requests an expression of your teaching interests, don't forget to include them. Be specific when you can. Mention your interest in teaching the courses listed in the ad as being required, if any, as well as any others you might have in mind. If your university library has a good collection of college and university catalogs on file, see if you can find one from the institution to which you are applying. Take a look at the courses offered there in psychology. When you refer to your teaching interests, refer to the courses that you would be interested in teaching for the institution to which you are applying by the titles of those courses at that institution. The catalog also will help better customize your letter, as you will learn more about the goals and atmosphere of that specific institution. Incorporate that knowledge in your application letter. A letter showing you are interested enough in the job to have "done your homework" is likely to make a good impression. The

payoff can be great for a relatively small amount of effort on your part.

The closing paragraph should indicate your hope that you have created interest in yourself, your wish to thank the reader(s) for their consideration, and your willingness to be contacted if there are any further questions.

### The Importance of Letter "Reviewers"

Don't mail your letter yet! First, ask your colleagues, advisors, and favorite reviewers to read and critique it. You would not submit a draft of a manuscript that had not been reviewed and revised "in house" prior to its formal submission. Consider this letter to be an equally important reflection on your professional self—it is! You may also wish to provide a copy of your letter to the faculty members from whom you've asked for a letter of reference. A copy of your letter will point out to your referees, as well as to the hiring committee, how you are particularly qualified for the job.

When the best tailor-made draft of your letter is written, add it to the top of your application materials, and send it all in. Keep copies of postal receipts for your records—sometimes the cost of job applications (including postage) can be tax-deductible. Then, sit back and wait patiently—the calls will come!

**Kathleen Morgan, APSSC Secretary**

*In the next issue: The Academic Job Interview*

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 national Advisory Committee. Students or faculty wanting information about APSSC school chapter applications should contact:

Kimberly Delemos  
Department of Psychology  
CB #3270, Davie Hall  
University of North Carolina-Chapel Hill  
Chapel Hill, NC 27599 Tel.: 919-942-0794  
Bitnet: UKIM@UNC

When applying, student chapter founders are asked to provide information about the institution, department, and students, and to designate a faculty sponsor.