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# APS Rings in the New Decade with Psychological Science

by Virginia E. O'Leary Observer Staff

The new decade begins for APS with the launching of its flagship journal, *Psychological Science* which is scheduled for release this month. According to Sandra Scarr, Chair of the APS Publications Committee the concept of a psychology journal modeled after *Science* was "an instant success." "It is a journal that is aimed at appealing to everyone in scientific psychology, it will cover current topics of general interest as well as more specialized research reports."

Janet Spence, Past President of APS noted that "the Society is doing swimmingly. In the context of its growth (there are now over 7500 members, including student affiliates), *Psychological Science* is another milestone. It is a journal that has broad audience appeal and will be accessible to all facets of the discipline. APS was designed to bring together those from diverse backgrounds in psychology in pursuit of common goals. The articles, selected to be of broad import will accomplish that. I am pleased that we were able to attract as eminent a psychologist as Bill Estes as editor, and as prestigious a publisher as Cambridge Press.

"There were half a dozen offers to publish *Psychological Science*," reported Scarr, "Although all the offers were generous, Cambridge came forth with an unusual offer to benefit the Society as well as the Journal."

Cambridge Press' Marketing Director, Barbara Colson observed, "From the very first time we heard about the Society and its plans for a new journal, we *knew* that it was a project for Cambridge. We had already worked with many of the people involved in setting up the APS, and so we were confident that the quality of the new publication would be high and that the enthusiasm of the Society

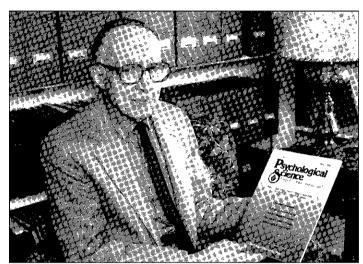


Photo by Nina Tovish

Professor William K. Estes

members would make the journal a success. This has been one of the most exciting projects in which Cambridge Journals has been involved in the past decade."

Bill Estes believes that "for a psychologist, getting an article accepted in *Psychological Science* should be the same kind of feather that getting an article accepted in *Science* has been for an experimental psychologist." As editor he sees diversity as the most critical element to the journal's success. "I am getting diverse manuscripts now (by Christmas I had received about 100, some invited), but I would like many more."

"It's been gratifying to see the genuine enthusiasm with which the call for submissions, first issued in April, has been received. It hasn't been just a flash in the pan.

(Continued on page 6)

◆ APS Task Force Supports COGDOP's Accreditation Plan 3

♦ A Conversation with Lynn Cooper 9

◆ I/O
Psychology
for
Eastern
Europe 12

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# The "Decade of the Brain"

James L. McGaugh, President



James L. McGaugli

A Congressional Resolution recently signed by President Bush designates the 1990's as the "Decade of the Brain." We can (and should) ignore the minor fact that the new decade actually begins in 1991. But APS should not ignore the major fact that this is the first Congressional Resolution to endorse a specific area of research since the National Geophysical Year. And, it is worth noting that the brain was given a full decade of attention! The Congressional Resolution (presented in part below) includes recognition that study of the brain involves multidisciplinary efforts of scientists from many areas, including psychology, aimed at achieving an understanding of the brain functioning in relation to development, health and behavior.

For more than a century scientific psychology has, of course, played a major role in research on brain processes underlying behavior. The contributions of Lashley dominated physiological psychology for decades, and his research findings continue to challenge current researchers investigating brain organization and functioning underlying perception and learning. Hebb's theoretical contributions remain widely influential in development of theories of brain

plasticity. Many of today's leading brain researchers have their academic roots in scientific psychology. These contributions, together with those of many other psychologists have had lasting impact on research and theory in the study of the brain.

But, as we enter the Decade of the Brain, several questions might be asked concerning scientific psychology's current emphasis on and support for brain research. First, is scientific psychology appropriately recognized for its research contributions to the study of the brain? Second, do behavioral neuroscientists continue to identify with and support organizations representing scientific psychology? Third, do psychology departments currently give sufficient emphasis and support to behavioral neuroscience research and research training? Or, put another way, does scientific psychology's current contribution to research aimed at understanding the brain recognize the importance of the effort as suggested by the Congressional Resolution? Does it match that of other disciplines listed in the resolution?

The designation of the 1990's as the Decade of the Brain provides an opportunity for APS to consider its role in promoting brain research. It would seem reasonable to observe the decade by giving special emphasis to programs and activities reflecting scientific psychology's achievements in brain research. APS should intensify its efforts to attract behavioral neuroscientists as members. And APS should play a leadership role in working with other scientific organizations in supporting research and training in brain research. After all, as Woody Allen said, (very roughly paraphrased) the brain is a very important organ. It is worth at least 10 years of APS support.

Whereas it is estimated that treatment, rehabilitation and related costs of disorders and disabilities that affect the brain represents a total economic burden of

(Continued on page 5)

# APS Task Force Supports COGDOP's Accreditation Proposal

by Marilynn Brewer

In July 1989, APS President James McGaugh appointed a Task Force on Graduate Education Co-chaired by Marilynn Brewer and Ursula Delworth. The Task Force's charge is to monitor and evaluate policies, programs and activities that are likely to affect graduate education in psychology. The Task Force has been concerned with a broad range of issues including working with the Council of Applied Masters Program in Psychology (CAMPP) in planning the first National Conference on Master's Level Training in Psychology (to be held in Norman, Oklahoma, June 2-5, 1990).

Of central concern to the Task Force has been the status of accreditation of professional doctoral programs and the impact of accreditation on doctoral education. At this time, the American Psychological Association is the sole accrediting body recognized by the Council on Post-secondary Accreditation (COPA) for programs in psychology. COPA is now reviewing APA's status as

an accrediting body and will determine whether or not to continue recognizing it at a meeting this month. This review provided that occasion for APS and other interested organization to comment on APA's accreditation process and procedures.

In February 1989 the Council of Graduate Departments of Psychology (COGDOP) decided to become more actively involved in the administration of accreditation of doctoral programs of psychology.

The APS Task Force supported COGDOP's intent and three members of the Task Force met with the COGDOP Subcommittee on Accreditation at a November 11-12 meeting in Chicago where a letter to COPA was drafted expressing a number of concerns about current accreditation practices and proposing a major restructuring of the entire accreditation process. COGDOP's Executive Committee endorsed the letter at their November meeting and it has been submitted

to COPA as a formal proposal.

In a letter to COPA's Committee on Recognition dated December 16, 1989 APS President James L. McGaugh expressed the Society's support for COGDOP's restructuring plan, noting that "APA no longer represents the perspectives of both the academic and professional communities in the balance required to administer a fair and even-handed accreditation program."

Because the issues raised in the COGDOP proposal are of such potential importance to graduate education in all areas of psychology, the full text of the letter to COPA is reprinted below. Please review the proposal and bring it to the attention of the members of your departments. Comments on the content of the letter and/or suggestions about APS' stand on these matters should be addressed to Dr. Marilynn B. Brewer, Institute for Social Science Research, University of California, Los Angeles, CA 90024-1484.

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To the Committee on Recognition:

We write on behalf of the Council of Graduate Departments of Psychology (COGDOP) regarding the current status of the American Psychological Association (APA) as the sole accrediting body for doctoral programs in professional psychology. Our intent is to bring to the attention of the Committee on Recognition some of the concerns of the doctoral training community in psychology about the legitimacy of APA as the sole accrediting body and about the manner in which APA implements the current accreditation process.

Indeed, we understand that the APA has communicated to COPA its own proposal that the governance and implementation of professional accreditation in psychology should be shared with COGDOP and perhaps other groups. Such proposals have been widely circulated by APA to its own membership, to its Board of Directors, and to COGDOP. We are pleased that APA shares our perception that the accreditation process in psychology must be opened to include those with legitimate interests in professional doctoral education. And we appreciate COPA's review of these proposals.

We suggest that the accreditation of doctoral programs in psychology should be restructured to include the doctoral educators, represented by COGDOP, as well as the professional membership of the APA. Therefore, we recommend that COPA defer its decision regarding the APA's status as the sole accrediting body in psychology until mutually satisfactory procedures can be proposed to you.

The organization we represent, COGDOP, was founded 25 years ago and is the national organization of graduate training programs for the PhD. and PsyD. in psychology. The membership is composed of more than 225 departments and schools that grant doctoral degrees in psychology in regionally accredited universities in all parts of the United States. COGDOP is recognized as the representative of the graduate educational community in psychology by many national organizations, such as the APA, the American Psychological Society (APS), and the Federation of Behavioral, Psychological, and Cognitive Sciences. The departments and schools of psychology are represented in COGDOP by their Executive Officers (Chairs, Heads), who meet twice a year to transact the business of the organization.

20 November 1989

# Comm. on Recognition

(Continued from previous page)

A democratically-elected Executive Board, listed on this letterhead, is in charge of the organization's affairs between the semi-annual meetings.

For the past two decades COGDOP has had, and continues to have, concern with issues of accreditation. The issues have been raised repeatedly at the semiannual meetings and in the work of the Executive Board. It has been COGDOP's position throughout these discussions that it is crucial to assure that accreditation of psychology programs should not jeopardize the quality of programs or in any way adversely impact psychology's ability to maintain flexible and responsive educational processes. There have been rising concerns among our members that the current accreditation process as implemented by APA impedes their ability to discharge their educational mission. These concerns have been exacerbated by the changes in membership and governance that the APA has undergone in the last two decades.

For many years the APA was the national organization of both academic and professional psychologists. Thus, it was logical that the APA was designated to act on behalf of the academic and professional communities in accreditation. However, for a variety of reasons, the nature of APA membership and governance have changed. It has now become the largest professional membership organization in psychology.

The APA's own studies of membership reveal that since 1970 the relative representation of academic psychologists in APA has declined sharply relative to the number of practitioners, resulting in a dramatic change in the balance between educators and practitioners. Concurrent with these changes in membership and governance, we believe there has been an erosion in the educational standards reflected in the accreditation process, as will be outlined below. The change in the educator/practitioner balance in APA has had adverse consequences for academic programs subject to accreditation.

The educational community in psychology is distressed about the manner in which the APA is currently implementing accreditation. The semi-annual meetings of COGDOP serve repeatedly as a forum in which our members express considerable frustration with the accreditation process. By and large, it is our experience that the accreditation process is vigilant about requirements that appear to satisfy practice interests but tends to ignore the scientific base and proper grounding in research methods. Procedures are often implemented in a manner

that suggests the existence of a canonical model of professional training that rewards conformity and penalizes experimentation and innovation. The graduate educational community cannot accept such a model of accreditation, for it is antithetical to academic diversity and program quality.

In the view of graduate departments that train professional psychologists, it is vital to provide practitioners with substantial grounding in science. The practice of psychology requires the continual application of investigatory models one acquires in graduate training as a behavioral scientist. Thus, the role of science in the training of practitioners cannot be overly emphasized. Yet, the process of accreditation, as implemented by the APA, has forced an emphasis on practice issues to the detriment of scientific training.

The problems enumerated above, and many other complaints of the COGDOP members, suggest that the procedures used by APA are inconsistent with several of the Recognition Provisions and Procedures, as outlined by COPA in the document entitled Provisions for Becoming Recognized as an Accrediting Body for Postsecondary Educational Institutions or Programs (COPA, July 1987). For your convenience, we list here the specific provisions with which the APA's accreditation process is inconsistent.

1. B1. "Provides evidence that its accreditation protects the interests of students, benefits the public, and improves the quality of teaching, learning, research and professional practice."

practice; As noted above, the current accrediting procedures, as implemented by the APA, so seriously threaten the quality of research training, and therefore of professional practice, that they fail to meet the provisions of B1. 2. B2. "Provides evidence that its policies, evaluative criteria, procedures and evaluative decisions are accepted by the appropriate communities of interest such as educators, educational institutions... As indicated by the writing of this letter, the current practices of APA are not accepted by educators and educational institutions. Indeed, it is evident that much of the academic community in psychology is dissatisfied with the procedures used by the APA, but we are forced to accept them because there are no alternatives. 3. B3. "Develops and interprets its evaluative criteria to encourage institutional freedom and autonomy, the improvement of institutions and

programs, sound educational experimentation and constructive innovation;"

The most common thread in the complaints by our leading educational institutions regarding the APA accreditation process is that neither site visitors nor the accreditation body as a whole are sufficiently tolerant of institutional diversity or experimentation.

4. C1. "Recognizes the right of an institution or program to be evaluated in light of its own stated purposes, so long as these are consistent with purposes generally accepted as appropriate in postsecondary education and the recognized scope of the accrediting body."

This provision is also violated whenever agents of the accrediting process require applicant programs to conform to a check-list in a manner that penalizes diversity and innovation.

5. C2. "Utilizes evaluative criteria and processes that judge...(c) educational outcomes which indicate that those purposes are met, and (d) the reasonable assurance of continued meeting of those purposes;"

There is very little consideration in the current accreditation process to assure that the outcomes of professional training in psychology benefit the public. Many critiques of professional training in psychology by graduate educators have pleaded for scientifically-sound criteria to evaluate the outcomes of training, but the APA has failed to implement such criteria for accreditation. Programs that are widely recognized to be among the best scientific trainers of professional psychologists are sometimes denied full accreditation without any evaluation of the outcomes of their training. Failure to emphasize the scientific bases of professional training ignores the need to train in methods of assessment and intervention with scientifically demonstrated efficacy. 6. C6. "Provides in its evaluation, policy and decision making processes an appropriate balance between...educators and practitioners (within the) accrediting body. The APA clearly fails to meet his provision, and this provision is the principal basis of COGDOP's request to COPA that APA recognition be

deferred. As noted above, the balance of educators and practitioners within

the APA has shifted decidedly in

# Comm. on Recognition

(Continued from previous page)

favor of practitioners. The policy-making Council of Representative of APA no longer has the appropriate balance between educators and practitioners. The majority of Council members represent practitioners, both because this ratio reflects the large proportion of practitioner members in the APA and because there has been a proliferation of practitioner-based subgroups that are allowed to elect members to the Council of Representatives

In view of the above, at the February 1989 meeting of COGDOP in Tucson, Arizona, the members voted unanimously that COGDOP should play an active role in the administration of accreditation of doctoral programs in psychology. Such a policy is, of course, consistent with Recognition Provisions, particularly with Provision C6.

A Task Force on Accreditation was appointed in February 1989 by COGDOP's Executive Board to review the accreditation procedures for professional programs in psychology. The Task Force consists of the Chairmen of the Psychology Departments at the State University of New York at Stony Brook, at the University of Colorado, at the University of Arizona, and at the University of Illinois - Champaign-Urbana. They reviewed the process and concluded that a new model for the administration of accreditation is needed. The Task Force outlined such a model and recommended it to the Executive Board at its meeting on November 17-18, 1989.

At its meeting on November 17, 1989, the Executive Board of COGDOP unanimously adopted the following principles and guidelines, developed by the Task Force on Accreditation:

**Principles** 

graduate training programs. The processes by which internship programs should be accredited is a matter for further discussion.

2. Accreditation must be organized in such a way that it assures the intellectual and scholarly quality of professional training for psychologists.

Considerations of quality and ethnic diversity should dominate decision making, not the bureaucratic conven-

1. The following principles apply to

3. The training of professional psychologists cannot be conducted within a model in which skills and procedures are taught with minimal attention to their scientific base and

ience of the accrediting agency or

fears about litigation.

#### Decade of Brain

(Continued from page 2)

\$305,000,000,000 annually;
Whereas the people of the Nation should be aware of the exciting research advances on the brain and of the availability of effective treatment of disorders and disabilities that affect the brain;...

Whereas comprehending the reality of the nervous system is still on the frontier of technological innovation...

Whereas the study of the brain involves the multidisciplinary efforts of scientists from such diverse areas as physiology,

biochemistry, psychology, psychiatry, molecular biology, anatomy, medicine, genetics, and many others working together toward the common goals of better understanding the structure of the brain and how it affects our development, health and behavior;...Now, therefore be it

Resolved by the Senate and House of Representatives of the United States in Congress assembled, that the decade beginning January 1, 1990, hereby is designated the 'Decade of the Brain'. ◆

without developing in the practitioner the means for evaluating theories, data, and the efficacy of professional techniques. Therefore, scientific training must be an important component in any professional psychology program, and the accreditation process must be sensitive to this need.

4. Responsible educational innovation and diversity of programmatic models must be preserved, rather than stifled, by the accreditation process.

5. As in many professional accreditation programs, the process should be governed jointly by the educational programs responsible for the training of professionals and by a membership organization that represents the practicing professionals. Both partners must share equally in the governance of the process and in its implementation.

These principles suggest the following Guidelines for the restructuring of the accreditation process for professional psychology: Guidelines

1. We propose that the APA and COGDOP form a Joint Commission for the Accreditation of Doctoral Programs in Psychology (JCAPDP). 2. The JCAPDP will report to both APA and COGDOP and will not be wholly subservient to either organization. Governance bylaws should be developed to assure proper sharing of authority, proper mechanisms for conflict resolution, and adequate joint supervision over the implementation of the accreditation process. 3. COGDOP will be the sole representative to the JCAPDP of the educational institutions offering doctoral

4. The APA will be the sole representative to the JCAPDP of a membership organization representing those engaged in the practice of psychology. 5. COGDOP rejects a model in which many organizations join in the JCAPDP. It must be clear in the governance structure of JCAPDP that there is a unique voice for educational institutions and that voice is COGDOP, and a unique voice for practitioners and that voice is the APA. How each of these two major participants deals with the diversity within its own constituency is an internal matter for each organization and should not affect the governance or operations of JCAPDP. COĜDOP categorically rejects the models that are frequently mentioned in APA documents, addressed to COGDOP and to APA members, in which COGDOP is given a place among numerous organizations with an interest in accreditation. Such models violate the cardinal principle that the educational community must maintain primacy in processes that affect educational quality. 6. It may not be necessary to dismantle the administrative structure that the APA has established to implement accreditation. The office currently directed by Dr. Paul Nelson could continue, under contract to JCAPDP, to implement accreditation in psychology. However, it would act under the guidance of the JCAPDP, not under the APA's Education Directorate, and it would be subject to continuing review by JCAPDP. The Executive Board of COGDOP

unanimously adopted the foregoing

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training in professional psychology.

# Comm. on Recognition

(Continued from previous page)

principles and guidelines. We therefore ask that COPA defer the Continuing Recognition of the APA as the accrediting body for doctoral programs in professional psychology until the governance and procedures of this accreditation process can be restructured to be consistent with these principles and guidelines and with COPA's Recognition Provisions and Procedures. We ask that COPA require a coordination of the educators' organization (COGDOP) and the principal professional membership organization (APA) in the accreditation of professional programs in psychology. This coordination is, of course, frequent in COPA's recognition procedures in other professions; e.g., in medicine, where a joint council of the medical schools and the professional organization accredit medical educational programs.

COGDOP can be flexible about the plan outlined in the Guidelines, but is firmly committed to the Principles enumerated above.

For the Executive Board and for the Task Force on Accreditation, I also request time at your meeting for us to testify and to answer any questions your committee may have of us.

Sincerely yours,

Sandra Scarr Commonwealth Professor and Chair, Psychology Department University of Virginia and Chair, COGDOP ◆

# Psychological Science

(Continued from front page)

Everybody wants to help, extending through reviewing—I almost never get a turn down, and when I do it's usually because someone is on his or her way out of the country."

"Now that the first three issues are complete I am beginning to get a feel for what I can expect in the future. This first issue centers on the beginning of APS, it contains several papers from the convention in Alexandria. March will more closely approximate a 'normal' issue. It will take a few issues before everyone has a good sense of style, length and content. The Society's response is critical.

In large measure we will know whether we have sent the right message when we see how many and what kind of submissions we receive. Right now our turn around is under two months. Authors whose articles do not receive a full review because they are not deemed appropriate for the Journal hear in a few weeks. One reason that turn around time is so short is that we do not see the Journal as a training ground so the reviews are not "helping" reviews. To date, this has worked well as most of the submissions have been from experienced authors."

"May is a special issue commemorating the centennial of William James' Principles of Psychology, in which all but one of the feature articles was invited. The William James issue had to be done in 1990 or it was not relevant. Once having decided to do it, I wanted it to be at the beginning of the year, before the June convention in Dallas. I presented this 'impossibility' to potential contributors and of 10-12 I contacted, all but 2 accepted the invitation to contribute. Amazingly, all but one manuscript actually arrived before the deadline. I admit that I have been surprised by the breadth of enthusiasm for the Journal. Realistically, it has been beyond what I could have asked for."

"The first big surprise was that I agreed to edit the Journal. The idea grew on me."

"As I look down the road I think we will continue to have a lot of special features of various kinds. Right now, I find it hard to think of adding professional staff to write substantive articles, although ultimately I do plan to experiment with the idea. I'd rather get psychologists to do the writing. In psychology we don't have the same need to have a constant flow of things that can be read by anyone regardless of background that Science does. So far I have been able to find psychologists to write creative features. One example is the article that Phillip Holtzman and Steve Mathias are doing on the genetics of schizophrenia for the July issue. It takes a lot of work to solicit and shape these articles, but they have greater scientific value than parallel efforts by nonpsychologists, I think."

"The Observer can be used as the Society's vehicle for op ed pieces. It is shaping up to be quite a publication and I think we can look forward to a promising division of labor between the two publications."

"I have been thinking about the coverage of public policy issues relevant to psychology in *Psychological Science*. One possibility might be a section of the journal devoted to policy issues."

"Cambridge University Press has fulfilled all my expectations for promotion," Estes said. "I oversee all the copy editing, all the communication between the author and the reader. They take care of all the communication between the manuscripts and the printer, the headings etc. It's working well. Now we await the members' verdict," Estes concluded.

Cambridge Press' Journals Manager, James Alexander reflected "Every launch of a new journal is a unique event, but *Psychological Science* truly has been special. It has been both a challenge and a lot of fun keeping pace with the energy and excitement of APS—and it is rare that a brand new journal has 7500 subscribers!

(continued on page 22)

# National Medal of Science Awarded to Roger Sperry

By Jim Warren

Pioneering brain researcher Roger W. Sperry has been named a recipient of the prestigious National Medal of Science by President George Bush.

Sperry, who received the Nobel Prize for Medicine in 1981 for his landmark "split brain" experiments, was honored for "his work on neurospecificity which showed how the intricate brain networks for behavior are effected through a system of chemical coding of individual cells, which has made fundamental contributions to the understanding of human nature."

A psychobiologist at the California Institute of Technology since 1954, Sperry was the only psychologist among the 19 scientists honored by the President on October 18, 1989.

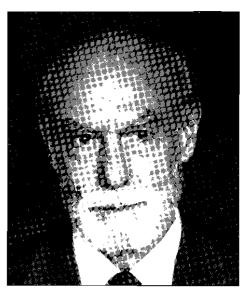
James L. McGaugh, president of the American Psychological Society, called the award well deserved. "Dr. Sperry's work has had an enormous impact on investigators concerned with brain function and behavior" McGaugh pointed out. "Clearly he has done some of the most exemplary research done in the field that was deserving of a Noble Prize so it comes as no surprise as other distinctions are awarded him for his work. His research has literally had an impact on everybody."

Sperry's award also was praised by Dr. Louis Judd, director of the National Institutes of Mental Health. "Through his elegant pioneering studies, Dr. Sperry has laid the foundation for an entire scientific field focused on the way in which specific components of the brain interact with one another," Dr. Judd said.

"He has framed the research questions and supplied the key building blocks for the whole discipline of neuroscience which is now one of the most exciting and fastest moving areas of the biomedical sciences. It is very fitting and appropriate that his singular contributions should be recognized by the National Medal of Science."

A native of Hartford, Connecticut, the 76 year old Sperry received undergraduate degrees from Oberlin College and his Ph.D. from the University of Chicago. From 1942 to 1946 he was a research associate at Yerkes Laboratories involved in surgical repair of injuries. He joined the faculty of the University of Chicago in 1946 as an assistant professor of neuroanatomy, and in 1952 became chief of the section on developmental neurology at the National Institutes of Health. He assumed his current position as Hixon Professor of Psychobiology at Caltech in 1954.

Sperry began his pioneering work in 1941 when he and his doctoral sponsor, biologist Paul A. Weiss, disproved the then prevailing belief that neurons in the growing nervous system formed connections nonselec-



Roger W. Sperry

tively through trial and error. He postulated that the nervous system works like a broadcasting system, which is essentially prewired, needing no new connections. Working with amphibians and fish, he showed that the growing nerve fibers become chemically "labeled" early in development and form connections with each other by recognizing complementary

(Continued on page 8)

# A Chat with Roger Sperry

By Jim Warren

Q: What was your personal reaction to receiving the 1989 National Medal of Science from President Bush?

A. The initial phone call from Dr.
Allan Bromely came as a wonderful surprise and brought a real lift, especially coming at this stage. I'm deeply grateful for the kind of support it means among my scientific peers, at the NSF and NAS, at the White House and within organized psychology.

It's good also to see the earlier neurospecificity findings get recognition. One can argue as to how these compare with later splitbrain work, but in my own gutlevel reactions I think we had a sense, back in the neurospecificity years, of passing through a more basic shake-up in our scientific mindsets.

Q You received the Nobel Prize for Medicine in 1981. What affect did that award have on your life and on your scientific research?

A. The Nobel Prize made a big difference of course in my general mental outlook, enhancing all kinds of personal and professional interactions and leading to my present emeritus appointment at Caltech as Board of Trustees Professor. There is no way I can ever adequately express what I personally owe to the committee in Stockholm and to all others responsible.

The award, however, brought little or no change in my actual

(Continued on page 8)

### **National Medal of Science Award**

(Continued from previous page)

labels on their surfaces.

Then, in experiments with animals, Sperry found that nerve endings that were severed from the eye's retina, and then rotated, found their way back to their original paths, showing that nerve connections are specific, not random.

But it was when Sperry moved on to this postdoctoral research and began studying the function of the corpus collosum, the small connection between the left and right brain, that his work had the greatest impact. His discovery that the two hemispheres of the brain can function independently of one another when the connection is cut, captured the public's attention in the late 1960's and early 1970's. The

research revealed that the two hemispheres differ in function; the left hemisphere devoted to speech and language, highly mathematical and analytical; the right hemisphere specializing in the ability to visualize and manipulate the three-dimensional objects of our world.

More important, however, was the fact the Sperry's findings prompted waves of research which have led to important developments in predicting psychological and behavioral responses to surgical interventions, stoke, brain injury an disease as well as strategies that can be useful in rehabilitating brain damaged children and adults.

Commenting on Sperry's research

in 1981, Dr. Herbert Pardes, then director of NIMH, pointed out some of its clinical applications. "Dr. Sperry's demonstration that the left hemisphere contains the primary speech capacity while the right is involved with short-term memory are paramount to understanding brain function both normally and in abnormal states such as autism and Alzheimer's Disease," Pardes said.

Sperry continues to be active today as a Caltech Board of Trustees professor emeritus and is focusing his energies on analyzing the cognitive/consciousness revolution. (See the question/answer interview with Roger Sperry that accompanies this article.)

### Roger Sperry

(Continued from previous page)

lifestyle. By that time, my activities already were largely ruled. by a progressive medical condition. My research program and interests also were little affected because I shifted several years earlier from split-brain projects to concentrate mainly on problems of consciousness Consciousness by then had acquired a new legitimacy in science through psychology's swing to mentalism and this had prompted a reassessment in my working priorities. I decided that the issue of whether mental states are causal had become more critical for me than whether they're more left of right hemisphere - espécially with the left-right brain research already by then well in orbit

- Q: Which scientist are presently involved in the most important research on the brain?
- A: We all, I suppose, think our work as important in some way and I

wouldn't venture to guess which projects may have the greatest long rum impact—except, perhaps, fo just mention that from my own standpoint the new parallel processing insights are today answering, at least in principle, problems that had us baffled for decades. How the brain, for example, goes from processing cognitive states at the mentally meaningful macro level to implanting memory-trace engrame for those at a much lower micro, synaptio, or even molecular level. And then how the reverse transformations, from the synaptic to cognitive levels, are achieved in memory retrieval. If I were starting out now in mind-brain research. I'd surely want to include rather thorough training in computer science

- O: What is the current focus of your work?
- As I'm still trying to analyze the cognitive/consciousness revolution. Everybody seems to have

their own different version I believe that basically it represents a shift from micro-to macrodeterminism in which traditional microdeterminism is integrated with new 'macro' and mental causation. I strongly suspect psychology's new cognitive/ mentalist paradigm will eventually become the dominant explanatory model for all science Holistic-emergent thinking, after almost dying a slow death back in the 1950's, is coming on strong today, infused with top down causation and spreading rapidly into other disciplines, including even physics via computer and chaos science. I think history will show that psychology was the first discipline to overthrow traditional bottom up determinism and lead science to a more valid explanatory paradigm applicable also for the humanities, and for all rational explanation. 🔷

# A Conversation With Lynn Cooper

by Don Kent Observer Staff

Lynn A. Cooper is a professor in the department of psychology at Columbia University. Her research interests focus on cognitive aspects of visual processing and representation, emphasizing the mechanisms of the mind underlying the representation of objects in space and spatial transformations. She currently serves on the National Research Council's Committee on Vision. She was a graduate student at Stanford University and has served on the faculties of the University of California at San Diego, Cornell University, the University of Pittsburgh and the University of Arizona.

- Q. You are looking into the human mind and trying to understand something about how humans think?
- A. That's one of the main challenges of cognitive psychology and one of its delights being able to ask questions about the human mind.

The questions have been of long standing interest not only to psychologists but to philosophers, social scientists and neuroscientists. Now we can ask them in experimental contexts where we have enough precision and control to understand the answers. We can operationalize our ideas about the human mind and study these ideas in a scientifically satisfactory fashion, in the laboratory.

- Q. It's amazing that the area of human thinking and mental life should have been set aside or disregarded by psychology for years. Was it really?
- A. Never entirely, but there was disappointment with the intrespective method of inquiry and the idea that introspection alone could provide a scientifically satisfying data base for understanding the human mind. Even in the heyday of behaviorism some psychologists continued to be interested in mental processes.

And it was from behaviorism that we learned to use methods for understanding functional relations —and for using those functional relations to make inferences about what underlying mental processes might be like.

Q. What happened to make research at the interface of cognition and perception possible now? Why didn't it happen earlier?

A. One of the things that has made the field of visual cognition blossom is advances in computer technology. We now have realtime computer graphics available. A lot of the experiments I'm working on now are things I've wanted to do for many years but only recently has the technology become accesible to individual investigators.

Sophisticated computer graphics allow us to make very good simulations of events that occur in the world, and enable us to look at the way that perceivers make judgments about those

Lots of questions that people have wanted to ask for a long time are just now being investigated in a rich enough way to maintain the complexity of information in the world but in a controlled enough way to be scientifically acceptable.

events, in a much more realistic and economically reasonable way than before —and also with a good deal of experimental control

Lots of questions that people have wanted to ask for a long time are just now being investigated in a rich enough way to maintain the



Lynn Cooper

complexity of information in the world but in a controlled enough way to be scientifically acceptable.

- Q. Are the underlying processes anything like those of a computer?
- A. To some degree. The analogy is most useful in its general form that is, when we think of human cognition as a system like a computer system for encoding information from the external world that comes through in a particular form that the machine understands and can work with and can manipulate and then decode it into some appropriate action in the world. In broad strokes, it is useful to make the analogy between human cognition and machine operation.
- Q. And human memory, is it computer-like?
- A. I think memory storage in human cognition can take a useful analogy from storing information in a computer. Yet, there is a very open question as to what the format of information storage in the human cognitive system is whether its symbolic content is

# Lynn Cooper \_

(Continued from previous page)

similar to or different in significant ways from the computer's. Moreover, as computer technology gets more sophisticated, there are more and more alternative ways of conceptualizing information storage even inside a computer. So the details of the brain-

...one of the problems is that perception is a process that's so effortless and automatic and seemingly runs off so well that we rarely have a chance to see the system fail or break down

computer analogy are in a state of transition, just as computer hardware is.

- Q. But you are looking at problems that have tickled and tortured humans for a few thousand years...how we know, how we organize our experience, how our chaotic momentary sensations can give us a coherent picture of a three-dimensional world with a time dimension, too.
- A. There is also the whole question of whether there are significant discrepancies between the world as it is and the world as we know it perceptually.
- Q. Somewhere you and Roger Shepard have written about your search into the mental machinery beneath our perceptions...in an article in Scientific American, I think ... that human spatial imagination may have come about, may have evolved, as an expression of the physics and geometry of the external world. Over evolutionary history, the rules that govern structures and motions may have been incorporated into human perceptual

machinery, you said.

- A. What Roger Shepard and I were saying there was that we are beginning to be in a position through our experimental studies to really ask fundamental questions about whether the mind has organizing principles like those for physical information, and what relationship those principles bear to the actual physical events they are simulating. It's a very exciting prospect.
  - Q. You are trying to identify organizing principles and structures experimentally...?
  - A. Yes, in certain experiments in my laboratory, we ask observers to predict the unseen surfaces of three-dimensional objects, or ask them to continue the trajectory of a moving object after halting the image. Or, they extrapolate other information about probable transformations, after we stop providing any more external information. These experiments provide important clues to the nature of mental structures or models that underlie the predictions and extrapolations.
  - Q. But what if there's a mismatch, if the experiment shows a big gap between the physical world and the observer's image of it? Do you abandon the experiment?
  - A. We don't abandon an experiment. We go with what it tells us. But one of the problems is that perception is a process that's so effortless and automatic and seemingly runs off so well that we rarely have a chance to see the system fail or break down. Any failures or discrepancies between the structure of information in the world and our perceptual experience of it can give us some interesting suggestions.

In some experiments I've done recently, observers watch objects undergoing transformation in three-dimensional space, through computer graphics. We ask

observers to extrapolate or extend the transformation through certain trajectories of motion. And we find they often make systematic errors in their anticipations or predictions about how the motions will continue - not errors in the path of motion or other really salient aspects, but errors of a more quantitative sort. They underestimate when an object will stop moving or the length of the path of motion. These errors are important sources of data, because they tell us certain things about the extent to which transformations in the physical world are really incorporated in laws that the mind has (and uses) for manipulating representations of physical events.

It is the whole question of whether there is some kind of mental physics, as it were, that maps onto the physics of objects in the external world. Sometimes we

It is the whole question of whether there is some kind of mental physics, as it were, that maps onto the physics of objects in the physical world.

find those mappings are extraordinarily good, but at other times, as our experiments become more sophisticated, we find certain interesting discrepancies, not in the way the whole process operates but in quantitative aspects of how the mind continues and extrapolates events in the world.

- Q. Do you find some observers just have plain bad judgment — they make assumptions that give them bad readings on a trajectory?
- A. Right. But it interests us to know

### Lynn Cooper

(Continued from previous page)

just what those circumstances are in which a person will make the correct solution versus one that's in error.

There is a way of conceptualizing perception and cognition that sees the problem of the perceiver as one of selection among multiple solutions to certain problems that can be posed by the information in the physical world. If we know the conditions in which observers come up with solutions very similar to what they would perceive if they could actually observe the continuing events, and know in what cases the solutions are wrong or different, then we can better understand the relationship between perceiving and imagining and something in between which might be called extrapolating perceptually basedtransformations.

# Q. What do you mean by these distinctions?

A. Sometimes we are observers to simulate an entire event purely in imagination. At other times it's like an outfielder trying to catch a ball — at certain times she/he has visual contact with the ball and at others she/he doesn't and has to simply extrapolate the trajectory of motion.

Or sometimes the perceptual information is ambiguous--more than one interpretation is possible. My colleague here at Columbia, Julian Hochberg, has done a lot of investigation of such questions. Certain objects can allow for multiple interpretations of and different perceived interpretations are coupled with different perceived directions for types of rotation or of motion. Sometimes observers will report a rigid object as rotating in a particular direction, and on other occasions they will perceive the same object as deforming and moving in the opposite direction. Hochberg finds there are certain conditions under which the perceptual system will opt for the non-rigid solution as opposed to the rigid one, and that yields some indication about the principles within the mind that guide such solutions.

- Q. Do you see any relationship between these experiments to learn how the mind functions and the projective tests used by clinical psychologists to detect emotional states?
- A. They're both external indicators of some buried mental process — it's an important similarity. They are both ways of externalizing something about the structure and coherence or lack of coherence of mental events that are going on that can't really be subjected to just verbal analysis. But there are significant differences, too. In the

perceptual experiments there are well defined criteria that subjects must meet to give an answer to a particular question. We know what the range is, and we know what one perceptual interpretation versus another might tell us about the nature of the underlying mental process. In the case of the projective tests, however, it's the very diversity of the responses that might be of interest, rather than which in a delimited setof alternatives.

- Q. What was it like to be a woman in experimental psychology a dozen or so years ago? And how about today?
- A. At scientific meetings now it's heartening to see a larger number of young women attending. That's a very hopeful sign. But in my

(Continued on next page)

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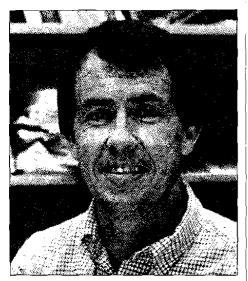
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# Something Else Eastern Europe Needs: INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY

An interview with Frank Landy by Don Kent



Frank Landy

STOCKHOLM—Frank Landy sometimes calls it "a pretty standard academic grant and contract unit."

But the Center for Applied Behavioral Sciences that he directs at Pennsylvania State University generates expertise for in a wide range of fields for East and West Europeans alike, and for federal and state governments in America.

Here in Sweden, the industrial/ organizational psychologist has been putting together projects that could revitalize Sweden's rapidly-closingdown nuclear power system, or at least keep the plants operating safely until they can be replaced by hydroelectric and wind-generated power.

Landy was in Hungary just before coming to Sweden, to pin down Hungarian participation in a four-country plan for nuclear plant personnel — with West Germany and the U.S. — focusing on the design of work teams, methods of supervision, and communications systems among power plant workers.

Rumania was another stop on this trip. Landy's work on stress with university psychologists there dates from 1985.

Yugoslavia often figures importantly in the visits Landy makes to Europe about twice a year. His work on stress, time urgency and job satisfaction in Yugoslavia involved four months of work there since fall of 1988.

But most of the work of the Center for Applied Behavioral Sciences is in the United States. A \$1.8 million contract to evaluate the U.S. Department of Agriculture's recruitment of hard-to-get scientists and top-grade technical personnel is one of the recent awards.

Critical factors for nuclear plants...

In Stockholm in mid-December, Landy talked with the Observer about the Penn State Center for Applied Behavioral Sciences' nuclear power plant personnel project:

"We are trying to put together a large combination of power plants and regulatory agencies, both Eastern and Western, European as well as American, to come to some agreement on what factors are the critical ones for human operators and ought to be built

(Continued on page 14)

# Lynn Cooper

(Continued from previous page)

own case, and the case of other women my age or older, it has been fairly lonely.

Q. You are...?

A. I am 42, and I didn't really have any female mentors a graduate student. I really think it's only by changing the numbers, the proportion of women in psychology going on to positions at researchoriented universities that we'll see any significant change. Certainly the number of women entering graduate school has changed. My perception is that there has been progress, but still not enough. And I don't think it can count as really significant change until we see a much higher proportion of women in the ranks of tenured faculty at major research institutions. When you see the numbers in the entering graduate classes and compare that with the number of women in tenured positions in research-oriented institutions, there's a huge disparity. There is something happening there, something institutional that still is not

making it possible for large numbers of women to enter the ranks of tenured faculty. That's

We may now be in a position to train people to look at the whole mind-brain issue in a reasonably sophisticated fashion, linked to experimental studies of patients who have specific cognitive deficits as a result of brain damage.

what I hope will change in the future.

Q. Looking towards the future at the interface of perception and cognition, what do you perceive?

A. Cognitive neuroscience is the area where it's quite generally agreed there is going to be a great deal of

# **Beverly Hitchins Joins APS:**

"I'm an organizer, a coordinator..."

By Don Kent Observer Staff



Beverly Hitchins

Many members already know Beverly Hitchins, who starts the new year with APS. She was an outstanding member of the American Psychological Association staff for about seven years, and comes directly from her position as executive director of the American Family Therapy Association.

Earlier, with the American Association of State Colleges and Universities, she helped find federal funding for projects. And private funding searches were a speciality in a previous job with a nationwide church-based social service agency.

Her avocations are also broad. Currently she is an officer of the Toastmasters' Washington-DC chapter. And she is president of the Washington Club of Wells College, where she did her undergraduate degree before going to Switzerland and Russia for further studies.

And when Bev says, "I'm an organizer, I'm a coordinator," you can believe it. "Give me a problem and I can put it into a structure and do what has to be done. I've got lots of en-

ergy."

For months she has been talking with Executive Director Alan Kraut about joining APS. "I wanted to get in on the ground floor," she says. "Can't imagine anything more creative and exciting."

Kraut says she will be working heavily on the APS convention, coordinating work of APS committees, giving membership support, and overseeing a range of other programs.

Though Bev and Alan never worked together directly before, they have run together in 10-mile and 10-km. marathon meets, sometimes at conventions with hundreds of psychologists looking on! She remembers beating Kraut a couple of times, including a particularly sweet victory in Orange County, California in 1984.

Kraut seems to hold no grudge, however, and has welcomed Bev aboard as a member of the APS staff, "The perfect person for us at this point."

# Lynn Cooper

(Continued from previous page)

good work coming forth. That's the interface between cognitive psychology and studies of the human brain. We may now be in a position to train people to look at the whole mind-brain issue in a reasonably sophisticated fashion, linked to experimental studies of patients who have specific cognitive deficits as a result of brain damage.

It will not any longer be a field in which we see case studies in medical settings on the one hand, and group studies in experimental settings with people who are just normal functioning adults, on the other. Rather, we'll see people trained to be very good cognitively oriented psychologists directly looking at patients with specific cognitive deficits.

Q. Are you predicting, or is this happening already?

A. It's already happening. There's some interest here at Columbia. A number of Universities including San Diego, Arizona, MIT, Johns Hopkins, Dartmouth, and Harvard already have very active cognitive neuroscience programs. Also, a number of major foundations, including the McDonnell Pew, have begun to fund research and training in this area.

Another area of great interest is applied cognitive psychology, applied in the sense of using knowledge that we have about human cognition to produce better man-machine interfaces, engaging in pilot performance modeling, etc.

Q. People are already doing those things...

A. But cognitive science will bring a great deal of understanding to it. The idea is to use a model-oriented or theory-oriented account of human cognitive processes in the design of machines with the machine-human interface in mind. This approach is similar to theory-based effort in the analysis of human intelligence and the construction of tests of aptitude. The influence of cognitive science in these undertakings is already being felt, it's effects will continue to be felt in the future.

# The Student Notebook

by Travis Langley

Officers of the American Psychological Society's Student Caucus (APSSC) are meeting this month (January) at Tulane University to begin implementation of the numerous projects with which the student organization has been involved. Projects under way or under consideration include the establishment of APS student chapters at colleges and universities, a job bank/job placement center at the annual convention, a student travel award fundraiser, a mentorship program, regional student conferences, and a network to allow students to become involved in collecting research data across the country.

The establishment of school chapters is taking high priority because it is through them that many of the caucus's projects will be managed. They will be particularly important in the recruitment of new students and informing others about APS and its objectives. Regional student conferences and the research network if implemented will likely be administered through the chapters. Many of the future national APSSC officers will emerge from among those who become active at the local level.

Student chapters are starting to form at a number of schools. As of December 31, 1989 three chapters had been recognized at the University of West Florida, Emory University and Hendricks College. Chapter charters are granted to recognize and assist students who want to be active participants in APS. Any student affiliates of APS will be welcomed as part of their individual schools'

chapters. The student caucus is not an honor society. Rather, APSSC aims to provide a voice for any and all of the Society's 2,195 student affiliates. Students or faculty who want information about chapter applications should contact Kenn White, 1203 South Elm, Norman, OK 73072, (405) 329-0821. Student chapter founders are asked to provide information about their institution, department, and students and to designate a faculty sponsor.

#### Job Bank to Open

The APS Student Caucus will be sponsoring and running the APS Job Bank and the Job Placement Center at the annual convention. Forms for applicants and employers will be made available through the Observer and convention mailings. Persons interested in participating in the Job Bank/Job Placement Center may register in advance or at the convention in Dallas.

The Job Placement Center will be open for registration on Thursday, June 7th and for business all day Friday and Saturday, June 8-9. Employer/Applicant listings, a message center, and interview space will be available at the Placement Center.

Students are needed to work at the Job Placement Center. APSSC members or chapters interested in volunteering to work should contact: Kathie Chwalisz, APSSC President, 361 Lindquist Center, The University of Iowa, Iowa City, IA 52242. Accommodations will be provided by APS for students who provide a significant amount of help.

#### APSSC Executive Council

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# Frank Landy

(Continued from page 12)

into the design of power plants.

"Right now the plants are designed by engineers. To some extent the engineers incorporate some of what we know about human factors—ergonomics, the design of knobs and dials, and things like that.

"But they don't know a lot about

the design of work teams and methods of supervision, methods of reward and punishment, communications systems among power plant workers. That's what we are concerned with."

Landy said that Hungary and West Germany "already have a couple of research teams looking at the problems of human operators and decision making in their plants. And I'm doing a similar project with the Swedish nuclear regulatory agency and with a couple of nuclear power plants in the United States." Landy expects at least three of the four

### Frank Landy

(Continued from previous page)

countries to take part in the Penn State project.

#### Swedes voted to close down...

Sweden has decided to get out of nuclear power entirely in the next 20 years, Landy said.

"Sweden began to develop nuclear power about 1969 and actually opened four plants in 1976, with plans to build 20 reactors by the time they would be finished in 1990," he said

"But after Three Mile Island in 1979, they absolutely reversed themselves. They now have 12 reactors that are up and working, but they are in the process of closing them all down.

"They took a vote in 1979 and agreed to get out of the nuclear power business by 2010. They expect to depend on hydro-electric power and wind power by that time," he said.

Asked whether he had a strong commitment to nuclear power, Landy said, "My business is to do research. I do work in both fossil fuel and nuclear power plants. So I'm concerned with technology no matter where it is. If Sweden were interested in learning how hydro-electric power plants could be run fairly, safely and efficiently, I would be interested in doing the research that affects those questions. No matter what the technology is, the human factor contribution is pretty substantial."

But can nuclear power plants be made safe?

Landy thinks so.

"We think we understand now pretty much what happened at Three Mile Island and Chernobyl, and some other places. There is finally a realization by the people in charge of technology that the behavioral sciences are not just academic games but actually play a major role in determining how you can control technology. So yes, I'm pretty optimistic about the contributions we can make."

#### What went wrong...

Certain behaviors helped to bring the catastrophe about, Landy said.

"For example, there was a feeling

of invulnerability among a lot of operators at Chernobyl and Three Mile Island — a feeling that there was nothing that could happen to us...that we are so good at what we do that we can really go outside of standard regulations and standard operating procedures and still control the system.

"There is also a tendency among operators to be lone wolves and depend upon themselves rather than asking other operators for help until it's absolutely necessary — and then it's too late. The system is completely out of control.

"You see, in a control room of a power plant there are anywhere from four to seven people. One of them is probably capable of running the plant under normal conditions — that is, just turning the knobs and reading the dials. But under emergency conditions or other difficult conditions where lots of information is coming in it's a tremendous advantage to have other people do that. However, there is a great deal of pride among the opera-

(Continued on page 19)

#### American Psychological Society Member Application Name Date MI Mailing Address City State Zip Affiliation and Position Education . Highest Degree Date Institution Major Field of Study Specialty Area Enclosed is my check for 📕 \$10 Student Affiliate \$1000 Sponsor \$250 Sustaining Member \$500 Patron \$10 Retired (over 65) \$250 Organizational Associate Send membership application to: APS Please bill my Mastercard Visa P. O. Box 90547 Account # **Expiration Date** Washington, DC 20090-0457 Signature

# **Science Notes**

#### NIMH to Fund APS Summit

Director Lew Judd is putting the National Institute of Mental Health on record as agreeing with APS that bringing scientific psychological societies together to come to terms with a national behavioral science research agenda is an important event. NIMH has agreed to support the Second Annual APS Summit Meeting of Psychological Societies (January 26-28, Tucson), and to spend additional funding on follow-up activities to the Summit over the next year.

"There is a priority within the Institute to increase the research underpinnings of NIMH," Judd told the Observer. "I hope our support of the APS Summit sends a strong message that we see behavioral science, both basic and applied, as fundamentally important to this mission. We also see the Summit as very timely in that we are now restructuring our basic science programs and are looking for psychology to point us in promising directions." (see related story on p. 17)

In addition, NIMH Deputy
Director Alan Leshner will be one of
the featured speakers at the Summit.
He will be presenting NIMH's perspective in the symposium, The DeFacto Agenda: Current Federal
Funding Priorities, one of the several
programs setting the tone for the
Summit. The symposium will also
include Richard Louttit of the National Science Foundation and John
Tangney of the Department of Defense.

Other featured speakers will include Keynoters Janet T. Spence, APS Past-President, and Charles R. Schuster, Director of the National Institute of Drug Abuse.

A second symposium, The Pros and Cons of Setting an Agenda, will feature R. Duncan Luce of the University of California, Irvine and co-author of the National Academy of Sciences' agenda-setting report *The Behavioral* 

and Social Sciences: Achievements and Opportunities, Frances Horowitz of the University of Kansas, Donald Foss of the University of Texas, and Marilynn Brewer of the University of California, Los Angeles.

But major activity at the Summit will be participation in working groups and plenary sessions. Participants will identify the pros and cons of setting a national agenda, weigh all the issues, and come to a tentative consensus about whether and how to proceed.

The participants will also confer on a wide range of practical issues related to setting an agenda, including:

Steps in building an agenda
Respect for diversity in setting an agenda

Roles of individuals and organizations in implementing an agenda Action strategies for supporting the complete agenda and the separate parts of it.

The biggest job of all, however, will be to identify themes that might provide the focus for a national research agenda. This activity, in particular, will be the most challenging, because it involves surveying our common ground and laying out the options for what might be built on it. Just as sequencing the human genome provides a theme for biological researchers, participants will seek unifying themes for psychological and behavioral science research.

The summit meeting will conclude on the morning of the 28th with a plenary session. The central question to be debated is whether an agenda setting process should be initiated. If the answer is yes, then the participants will identify the members of a steering committee, and charge the committee to pursue a set of consultative and action steps that will insure that participation of all societies to the extent that it is wanted.

Building a national research agenda will take a year or more. It will require the combined energy of the

leaders of all groups interested in psychological research. If there is to be national research agenda, it will not be completed at the Tucson meeting, but it will surely start there.

In addition to APS, some of the many organizations that have agreed to send representatives to the Summit include: The Psychonomic Society, The Society for Computers in Psychology, The Society for Research in Child Development, The Council of Graduate Departments of Psychology, The Federation of Behavioral, Psychological, and Cognitive Sciences, The American Evaluation Association, The American Psychological Association, The American Educational Research Association, The Society for Industrial and Organizational Psychology, The Jean Piaget Society, The Rocky Mountain Psychological Association, The Society for Personality and Social Psychology, The Eastern Psychological Association, The Society for Research in Psychopathology, and many more.

## NIMH Focussing on Behavior

The last two *Observers* reported on Congressional action urging the National Institute of Mental Health to focus more on behavioral science. The Senate Appropriations committee, in particular, directed NIMH to "initiate new programs aimed at increasing a behavioral and psychological presence at NIMH." We are pleased to report that NIMH has begun to do just that.

To begin with, at the late 1989 meeting of the National Advisory Mental Health Council, Director Lew Judd announced that NIMH would petition higher-ups in the Department of Health and Human Services to change the name of the NIMH Division that funds most of the Institute's basic research. It will soon be called the Division of Basic, Brain, and Behavioral Science — to be known as DB3 — marking the first time that "Behavioral Science" appears that

high up the NIMH organizational chart.

The name change is much more than window dressing. Seven reorganized "branches" below the Division will reflect a heavier emphasis on behavioral approaches. One of the branches will even be called "Personality and Social Processes Research" and will cover interpersonal and family processes, personality and emotions, and sociocultural and environmental processes — topics not given such visibility since the crackdown on social research at NIMH in 1981.

NIMH is now conducting national searches to attract senior behavioral scientists to develop these branches. (see ad on P. 34)

Two other signs that NIMH is getting more interested in behavior are first, an agreement to a request by NIMH National Advisory Council member (and APS member) James lackson to focus much of the next Council meeting discussing NIMH's behavioral science support; and, second, the NIMH funding of the APS-organized Summit Meeting of Scientific Psychological Societies whose purpose is to begin a process

that might bring about a national behavioral science research agenda. (See story on p. 16).

On a related note, APS Executive Director Alan Kraut made an introductory presentation about APS to the NIMH National Advisory Council at the late 1989 meeting referred to above. Director Lew Judd warmly welcomed APS to the fold of organizations concerned with NIMH, and recognized the efforts of APS in lobbying for increased funding for NIMH for 1990.

APS will continue to monitor events at NIMH as they unfold. We are pleased at the increased importance being given to behavioral issues and look forward to working with NIMH for funding to accompany the structural changes.

#### All Together Now

It is a truism in Washington that effective advocacy must include a measure of coalition politics. The idea is to bring many organizations together who are all interested in the same general issues. Usually, good things follow.

Coalitions may be so loose as to exist only so that member organizations might informally share information with one another. Or they may be so formal as to actually control what their members say on a certain topic. Most fall somewhere in between.

When coalitions work well, they can be enormously effective. Groups in agreement on how to pursue an issue get to share information, resources, and, along the way, their message gets amplified by the other members of the coalition. Instead of one organization presenting one message, 50 organizations are presenting one message.

APS has been in Washington only since August. But already we have developed a presence that has made us an active member of a number of coalitions and heavily recruited to be a

(Continued on next page)

#### Division of Basic Brain an Behavioral Sciences (DB3)

#### Basic Behavioral and Cognitive Sciences Research Branch

Basic Behavioral Processes Program

Cognition, Learning and Memory Program

Theoretical and Computational Psychology Program

#### Basic Prevention Research Branch

Behavioral Medicine Program

Populations at Risk Program
Prevention and Behavior Change Program

#### Cognitive and Behavioral Neuroscience Research Branch

Behavioral Neuroscience Program

Cognitive Neuroscience Program

Theoretical Neuroscience Program

#### Molecular and Cellular Neuroscience Research Branch

Developmental Neuroscience Program

Neurogenetics Program

Neuroimmunology/Neurovirology Program Neurotransmitter/Neuroregulation Program

#### Neuroimaging and Applied Neuroscience Research Branch

Neural Systems Program Neuroimaging Program

Neuroscience Centers Program

#### Personality and Social Processes Research Branch

Interpersonal and Family Processes Program

Personality and Emotions Program

Sociocultural and Environmental Processes Program

#### Psychopharmacology Research Branch

Behavioral Pharmacology Program

Neuropharmacology Program

Psychotherapeutic Drug Development Program

# Science Notes (continued)

member of many more. Here are just a few of the coalitions to which we belong, and a little bit about what they do:

The Coalition for Health Funding is comprised of over 40 national professional, scientific, and voluntary health organizations. Included is the March of Dimes, the American Public Health Association, the American Nurses Association, etc. It focuses on the budgets and appropriations for the National Institutes of Health, the Alcohol, Drug Abuse, and Mental Health Administration, and the Health Resources and Services Administration. It is one of the more organized and effective coalitions in Washington, having its own professional staff. APS **Executive Director Alan Kraut serves** as Secretary/Treasurer.

The Mental Health Liaison Group is comprised of over 35 national organizations who concentrate on mental health research, training, or services. Along with APS is the National Alliance for Mental Illness, both the American Psychiatric and Psychological Associations, and the National Mental Health Association. It exists mainly as a forum to share information, although once a year it develops recommendations to Congress for the funding of the National Institute of Mental Health.

The Consortium of Social Science Associations has over 40 members and affiliates including the American Sociological Association, American Political Science Association, American Association of Geographers, and the American Anthropological Association. Although its history as an informal coalition goes back many years, it began as a formal group in 1981 to help fight against cuts in social science research. It concentrates on the National Science Foundation.

The Federation of Behavioral, Psychological, and Cognitive Sciences

includes the American Educational Research Association, the Society for Research in Child Development, the Psychonomic Society, and a number of smaller scientific societies. APS has been a trial member for the past year. The Federation is best known in Washington for a long-standing series of Capitol Hill seminars that present behavioral research to Hill and Federal Agency staff.

The National Prevention Coalition is a group lead by the National Mental Health Association for the prevention of mental-emotional disabilities. Recently, they coordinated a multiorganizational response to an investigative report by the U.S. General Accounting Office on the National Institute of Mental Health's prevention efforts.

The National Association for Biomedical Research has taken on the single issue of the support of animal research — and taken it on effectively. They are comprised of many scientific, pharmaceutical, and industrial organizations including the Association of American Medical Colleges, Eli Lilly Company and the Gillette Company.

# APS Comments on Conflict of Interest

One of the hotter topics among Washington science policy types these days is conflict of interest among researchers. Several sets of Congressional hearings have been held over the last two years focussing on alleged abuses of the scientific system.

This past fall, the National Institutes of Health published proposed guidelines for how the NIH and the Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA) might deal with financial conflicts of interest among its potential grantees. In a letter jointly signed with the Federation of Behavioral, Psychological, and Cognitive Sciences, and the

Consortium of Social Science Associations, APS responded to the proposal. Our major point was to state that potential problems on financial conflict of interest are limited to those scientists whose work places them at the transition between advanced research and product development, testing, or evaluation for some kind of commercial application. We maintained that most of the work in this area is above reproach, but that if financial conflict of interest guidelines are to be developed, they should be focussed on this relatively small research population. We could not endorse the broader scope of the proposed guidelines which would apply to any NIH or ADAMHA grantee — no matter how basic or lacking in financial reward the research — and which would require major new record keeping for all laboratory personnel, including, in some cases, full financial disclosure statements from spouses and dependent children.

At the broader level, however, we endorsed an educational effort to promote a greater awareness of conflict of interest and, within universities, of the particular institutional policy regarding specific conflicts. We also encouraged the development of a simple questionnaire that would define associations that represent a conflict of interest and would ask the respondent if such conflicts exist for him or her and to list those that do.

The next step in this process is for NIH and ADAMHA to re-evaluate their proposed guidelines in response to the comments they receive and publish revisions. We will keep you posted on developments.

#### Jean Piaget Society Affiliates with APS

The Board of Directors of the Jean Piaget Society: A Society for the Study of Knowledge and Development voted unanimously at its October 7,

(continued on page 22)

# Frank Landy

(Continued from page 14)

tors. They would rather not have to ask for help," he said.

There ought to be a lot of team work involved, Landy said.

"But unfortunately there is not enough. Plant workers train as teams, and they work as a group. But each team member tends to develop a specific set of activities — one keeping the log, another at the control board, a third taking readings, a fourth inspecting. They tend to develop their own little niches.

#### Need more redundancy...

"We believe they would be much better off, and the plants would be run in a much safer and more efficient manner, if they built in more redundancy — that is, if two of them were actually doing similar kinds of things and needed to check against each other in doing it, like a pilot and copilot in a plane.

"Many human operators, particularly at high levels of technology, see that as wasteful. Why should two people do the same thing? So the notion of the redundant system which has a check and balance from another part of the system isn't always present in the human part of a technical system.

But many people in Sweden and Hungary are now welcoming such ideas.

#### No one was buying it...

"Until Three Mile Island and Chernobyl occurred, nobody was really buying it. The engineers were not listening seriously. Behavioral scientists said disasters could happen, in fact, we said they were almost inevitable. But the others tended to phoo phoo. Then, after Three Mile Island and Chernobyl they realized the public could shut them down, the public essentially could become so concerned about technology out of control that it could put them out of business - so now they are listening to a lot of people, including behavioral scientists.

Industrial/organizational psychology is in short supply in Europe, Landy said, particularly in Eastern Europe.

#### I/O as an avocation...

Even Hungary, though the most advanced of the eastern European countries, hasn't trained industrial/ organizational psychologists. "There are engineers who have picked this up almost as an avocation rather than a vocation. And Eastern Europe has tended to be pretty far behind the developments in the West, because people can't travel widely to conferences and meet with colleagues. In five or ten years, however, Hungary may catch up. The important thing is for them to make close contacts with people in the United States who are doing I/O research and this is increas-

"There are psychologists at the technical university in Budapest doing what is called applied psychology. Then there is another university in Budapest where physiological research is done. But the psychology department people in that university don't know anything about the people in the technical university --- when I was in Budapest a few days ago I put them in touch with each other! When we become interested in stress affecting decision making among nuclear power operators in Hungary, it will be important for those two groups to talk to each other.

Since I introduced them to each other, the people who work on nuclear power plants are familiar with the medical university people doing work in comparative physiology and human stress.

"I'm hoping that over the next couple of months we can bring those two groups more closely together, as they would be in a psychology department like ours at Penn State or other American universities, where you only have to walk down the hall to talk to each other and listen to colloquim and know what kinds of research they're

publishing. It's so much more compartmentalized in the East European universities.

#### Where it all began...

Landy's European interests started to take root when he went to the University of Stockholm for a year as a Fulbright scholar in 1976. He returned to Stockholm in 1979 for another year.

"Then in 1982 I decided I'd better learn more about Eastern and Central Europe, so I went to Hungary and Yugoslavia, Czechoslovakia and Rumania. With grants form the National Academy of Sciences, I arranged to spend a couple of months in Rumania in 1985. Then I received another Fulbright to go to Yugoslavia. So I'm doing research now in all those places with colleagues, and in Italy as well, where we have a couple of colleagues."

Sweeping political changes in Eastern Europe, as exciting as they are, haven't deflected Landy's eye from what he calls "the elephant in the room" — from the problems of the Soviet Union itself.

"People are so taken with the changes in the Warsaw Pact nations like Hungary and East Germany that they are not looking at the internal problems of the Soviet Union that are severe economically, and politically with Lithuania, Estonia, Latvia and Moldavia. These are not independent nations. They're almost like states of the United States. And the Soviet Union is having a hell of a time with some of them right now.

#### While back at Penn State...

Interdisciplinary research involving more than psychology comprises the largest share of the work of the Penn State Center for Applied Behavioral Sciences that Landy heads.

"For example, our five-year U.S. Department of Agriculture project involves people from agriculture, economists, psychologists, people

### Frank Landy

(Continued from previous page)

from policy evaluation and from public personnel administration, and some measurement people as well. Within psychology, we have industrial psychologists and social psychologists," Landy said.

Recruitment of scientists and top technicians, and employment practices are the focuses.

"The Department of Agriculture is like a lot of other federal agencies, competing unfavorably with the private sector for scientists and professionals. At the same time, it has been very difficult to get into the federal service — you have to jump through 10 or 20 more hoops than you would have to do to join a private organization. And the government has been rigid about paying moving expenses and cash bonuses for signing up, for example.

"Now Agriculture has permission to experiment with a new recruitment system reducing the number of hoops, as well as providing cash incentives and moving expenses and other things.

"In exchange for the special permission, the Department has to contribute an evaluation that might show whether the program should be generalized to other government agencies.

#### No beltway bandits, please...

"In the past, the Office of Personnel Management (the former Civil Service Commission) hasn't been happy with evaluations done either by the agency itself or by 'beltway bandit' firms. Often the evaluations weren't set up in ways that allowed unequivocal inferences about what happened, why it happened, and whether it was a success or failure. If done inside the agency there was some question about the integrity of it — was it made to look particularly good for the agency?... or particularly bad, because that agency didn't want the innovation to continue? And as to the consulting firms often located around the Washington beltway, they would have to contract out for the services,

whereas the Center for Applied Behavioral Sciences has the interdisciplinary team under one roof.

The focus of the Agriculture Department program and the evaluation being done by Landy's group is not entirely recruitment.

"It also looks at the way the government makes decisions to grant career tenure to scientists, just like tenured academics. So we'll be evaluating the length of the probationary period before career tenure is granted."

Good research doesn't necessarily result in better outcomes for society, Landy reflected in reviewing projects he has handled through the last two decades.

#### Foreign Service - Plus change...

He evaluated U.S. Foreign Service personnel practices from 1970 to 1975, looking at the demotivating factors in the way millionaire or political ambassadors were being appointed from outside the foreign service.

"It has probably gotton worse since," he says today.

Results tended to be better from his work with the Justice Department on law enforcement, the Office of Naval Research, and with Labor Department on career development of engineers.

#### Religious headgear...

More recently one of the curious cases studied by his center at Penn State was the effect on public school children of religious garb worn by their teachers. The case came up after a school teacher who persistently wore religious headgear to the public school where she taught was fired and sued. The action was taken under a 1899 Pennsylvania law outlawing religious garb and symbols in the classroom, but the law may be in conflict with equal opportunity laws prohibiting discrimination based on religion.

"We found some things that were interesting — wearing of religious garb will certainly cause children to ask questions. They want to know

why you are wearing that, what's going on, why are you different? One of the concerns of the Supreme Court is that anything that draws attention like that will give the teacher opportunity to proselytize... and if they ignore the question the issue becomes even more mysterious. So it was an interesting psychological problem, and we came to some modest conclusions: the religious garb would have an impact on question asking and the questions would by 'why' rather than 'what.' The case was decided on behalf of the plaintiff at the Federal District Court level last year," Landy said.

Research projects aren't Landy's only activity.

He teaches courses in introductory psychology to classroom populations up to 400 students and conducts small seminars in statistics and design, industrial psychology, motivation and emotion. He has written two books on introductory psychology and others on industrial psychology.

#### Real life is messy...

Furthermore, the university's policy is that everyone at its research institutes has both a research and teaching mission "and so we engage graduate students pretty substantially in the research that we do,... This is an opportunity to teach them the real-life aspects of complicated and demanding field research. It's messy and requires statistical control instead of experimental control. There are all sorts of problems with it."

For Landy, the mix of academic world and bigger-than-life projects on the fringes of Europe seems to fit.

Is he the envy of other academics, the non-migratory ones?

"Maybe, I'm not sure," he says.
"Sitting in this little hotel room in
Stockholm now, having frozen my
butt off out on the street today in the
winter's worst cold...well, it's stimulating, and doesn't leave a lot of room
for being bored."

# Gender in Academe: The Story of a Conference

by Ellen Kimmel

What happens when feminist scholars representing over 50 institutions of higher education from 22 states and Canada gather to report their research and experience? Magic! In early November 120 women and men gathered in Tampa, Florida to examine on of the most discussed and long-standing issues in contemporary higher education, the role of gender in the academy, as seen from the perspective of no fewer than 27 academic disciplines. The three days of presentations covered gender in the curriculum-what we teach and howgender in the socialization process our own and the next generation'sand gender effects on the status and experience of teachers, researchers, administrators, and staff.

Sociologist Bonnie Thornton Dill, Director of the Center for Research on Women at Memphis State, opened the dialogue by reminding the group that there is no single women's experience, but that variables of gender, race and class interact in complex ways. She pointed out that just as feminist work occupies a marginal status and is ghettoized within the university curriculum, race occupies a marginal status within feminist theory where race and class are treated as secondary, acknowledged then ignored, and described but not explained. She emphasized that gender, race and class are not neutral, ascribed traits, but active forces that serve to maintain inequality.

The systems of inequality are interdependent and create different opportunities, choices and life outcomes. So, for example, there are typical women's jobs, and typical minority women's jobs. An approach that sees how these interlocking systems impact on people who attempt to cope with their oppressions challenges basic assumptions of the White male standard as only a part of a story that depends on the subordinate status of others. As Helen Bannan, of Florida Atlantic University argued in her paper, "My Muther's WASP," we must "spell" ourselves with different letters. Male, young, middle class, urban, tall (and thin), healthy, east coast establishment, right-handed and, straight as well as White Anglo-Saxon Protestant and are the assumed norms and all others who fail to occupy one or more of these categories are suspect and disadvantaged.

Holder of both a named and a university chair of history at the University of Wisconsin, Gerda Lerner delivered a fiery conference address on the universal tradition of women's educational disadvantage. Whether education was based within the family or in outside institutions, only a handful of exceptional women received an education, and they were the daughter's of the aristocracy whose father's permitted them to be instructed along with their brothers. The 17th Century is noted by historians for its liberalism in this regard. Nonetheless, the total number of learned women in all of Europe at this time is estimated to be 250. Of these, all were wealthy and almost all single and sequestered. If they chose a life of the mind, women were automatically excluded from the life of a woman. Only in the 20th Century dared anyone to suggest that women could "have it all," although few do. Time (December 5, 1989) reports that of the U.S. top executives in business today, 90% of the men are married versus 10% of the women.

Several sessions challenged the quality of education for today's woman. Questions were raised about the intellectual atmosphere for women students given the relative invisibility of the new scholarship. Margaret Collins-Weitz reported on one response to the intellectual abuse of women in the academy that was describe in Women of Academe: Outsiders from the Sacred Grove. The book tells of a group of women PhD's underemployed or unemployed in the Boston

area who organized themselves into a political alliance of independent scholars. They made themselves visible by attending conferences and participating in scholarly organizations. They applied for grants and fellowships and published prodigiously, ironically rendering themselves even more overqualified for the entry level jobs to which their formal experience relegated them. Unafraid of negative judgments at tenure time, they were free "to follow their own bent." A comparison of this group with a full-time women faculty indicated that those outside the grove were more productive and creative than their peers who felt constrained in what and how they chose to study.

Psychology's own Florence Denmark reviewed for the group the tools social psychology provides feminists to persuade. Judith Worell, incoming editor of APA Division 35's journal, Psychology of Women Quarterly, excited the conference with her presentation on the question of whether feminist journals offer academic empowerment or professional liability. Her conclusion, along with that of fellow editors of Hypatia, Gender and History and the University of South Florida Press, was that feminist journals offer both. While these journals provide a voice, visibility and validation for feminist scholarship they also permit stagnation, devaluation, and the ghettoization of women's research. Worell enumerated the feminist criteria that are used to evaluate manuscripts submitted to The Psychology of Women Quarterly. These include asking whether or not the research challenges the traditional views of women, employs alternative methods of inquiry, places people in context, involves collaboration with research participants, uses diverse samples, makes sex comparisons in context, avoids blaming victims, empowers women of all groups,

#### Gender

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examines structural and power hierarchies, and has implications for social change. Commendable as these may be, she warned that scholars who elect to publish in feminist journals risk mainstream invisibility (there are fewer citations to work in feminist outlets by authors publishing in mainstream journals) and devaluation of their work by non-feminist colleagues.

Speaking on the future of science and the role women must play in it, Sue Rosser, author of the forthcoming book, Feminizing Science, described 20 recommendations she has made at the request of the U.S. Office of Science and Technology to incorporate women's studies methods in encouraging the entry of women into science. The drastic shortages of scientists predicted in the the coming decade has rendered this normally conservative agency more open to suggestions in curricular reform from elementary school through post-doctoral training. Rosser, a zoologist, contended that while science could be a route out of poverty and inequality, it is viewed by many young people, especially females, as man's vehicle to dominate nature. She called for a refocusing of the old paradigms for scientific training, a refocusing that would be more responsive to the needs of the people who do science to have a life outside the laboratory as well as within it.

The conference ended with exhortions from the Chair of the Florida State University Systems' Board of Regents, Joan Ruffier, to pursue the goals elaborated during the three day meeting. Without denying that early pioneers in changing the academy suffered many setbacks, she was cautiously optimistic about the future of women in the new decade and the new century. It is a future in which the necessity of educating the majority (women) is a challenge that cannot be ignored. •

# Who Are We?

In an attempt to learn a bit more about ourselves APS recently took a look at the subspecialities of its members as indicated on the membership application. About 80% of the members complied with the request to indicate their specialty and the analysis below is based on those responses.

Experimental	32.33%
Social/Personality	16.82%
Health Care	16.53%
Developmental/Educational	15.78%
Applied	12.30%
General	4.60%
Other	1.6%

Based on an analysis prepared by Ann Howard

# Psychological Science

(Continued from page 6)

Working with real pros like Bill Estes, Sandra Scarr, and Alan Kraut has been a great help, of course. The tremendous wealth of contributions in the first few issues shows that *Psychological Science* will be a formidable flagship for APS!"

The Publications Committee is now active in looking toward other initiatives such as a book club and a journal club. They are also exploring the possibilities of beginning another journal or two or adopting journals not currently sponsored by scientific societies.

# Jean Piaget Society

(Continued from page 18)

affiliate with APS. Jack Meachum of SUNY, Buffalo raised the question of affiliation and it was generally agreed that at this important historic time for psychology scholarly and research organizations such as the Piaget Society ought to be part of the dialogue. A dialogue that "has the potential to change the way the scientific side of psychology is represented," according to Kurt Fischer of Harvard. ◆