

The Psychological Science Agenda



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Psychology: Live and on the Air!

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Join the community of psychological scientists as Science Friday, the popular National Public Radio program, broadcasts LIVE from our Science Leadership Conference on Friday, December 2. Tune in to enjoy a really lively discussion of the two topics of the day – Gender and Cognition, and Emotions and Health!

Ira Flatow, one of the country's best known science journalists, is the host of Science Friday. He will be interviewing a number of scientists who will participate in the Science Leadership Conference during the two one-hour segments of the show.

You can easily check your access to Science Friday programming by going to the Science Friday homepage (www.sciencefriday.com), clicking on "stations" in the left column, and typing in the name of your state. Keep in mind that if your town is near a metropolitan area across the border, you may find the closest station in a neighboring state. You can also get the full listings of stations by selecting that option. Station call letters and numbers, as well as broadcast times, are all shown. Keep in mind that some stations do not air both hours of the show. Science Friday may also be downloaded in its entirety ('pod-cast').



Ira Flatow, host of Science Friday.

Science Friday's call-in component features callers from all over the country, eager to ask questions about the topics of discussion. What a great way to share our science with people interested in psychology.

The Science Friday web site maintains archives of past shows, which can be useful teaching aids. The "Kids Connection" portion of the website aggregates appropriate material from past shows for use in elementary and middle school science classes.

Don't forget to tune in December 2 to the NPR station nearest you. You won't want to miss this significant step toward enhancing public understanding of psychological science.

SCIENCE BRIEFS

Cyberinfrastructure for the Social and Behavioral Sciences

by Bennett I. Bertenthal

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Bennett I. Bertenthal is a Professor of Psychology and Computational Neuroscience at the University of Chicago. He is also a Senior Fellow of the Computation Institute at the University of Chicago. Prior to this appointment, he was the Assistant Director of the Social, Behavioral, and Economic Sciences (SBE) Directorate of the National Science Foundation (NSF) from October 1, 1996 to December 31, 1999. Dr. Bertenthal is the author of more than 100 publications on perceptual, motor and cognitive development, developmental cognitive neuroscience, visual processing of motion information, perception and production of biological motions, nonlinear modeling of posture and gait, and science policy. He is a fellow of the American Association for the Advancement of Science, the American Psychological Society, and the American Psychological Association. Dr. Bertenthal was the recipient of a Career Development Award (1985-90) from the National Institutes of Health, and received the American Psychological Association's Boyd R. McCandless Young Scientist Award for distinguished research in 1985.

Social and behavioral science requires the ability to compare, measure, and search for patterns in semi-structured and heterogeneous data. The challenge is to integrate information over time, place, and types of data in order to scale up the opportunities for comparisons. Once these diverse datasets are integrated, tools are necessary for annotation and analysis of the different data types, including voice, video, images, text, and integer and real numbers.

Currently, investigators studying the neural, cognitive, and social behaviors of humans lack the tools to assess multiple measures at multiple levels simultaneously and to store and analyze these measures in a common database. Significant conceptual, technical, and analytic advances are necessary for understanding multimodal human behaviors at different time scales. This new field lies at the intersection of computer vision, database design, psycholinguistics, cognitive and social neuroscience, psychology, linguistics, education, anthropology, sociology, and

high speed computing and networking.

Successful collaboration among these diverse disciplines requires a 'data interface' (e.g., shared datasets and databases), a 'service interface' (e.g., shared tools for analysis), and an intellectual interface (e.g., shared problems and theories) to support multidisciplinary research.

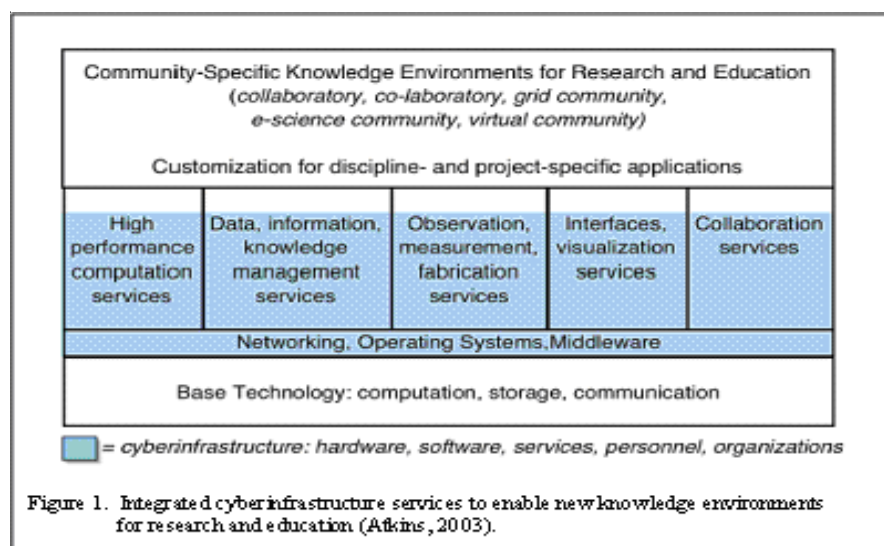
In response to this need, my colleagues¹ and I are developing a **Social Informatics Data (SID) Grid** that will enable researchers to collect real-time multimodal behavior at multiple time scales. Multimedia data will be stored in a distributed data warehouse that employs Web and Grid services to support data collection, storage, access, exploration, annotation, integration, analysis, and mining of individual and combined data sets. Although a number of groups are currently developing large data archives for research purposes, our project is unique because it is focused on

streaming data, such as videos and physiological measures, which change over time. The ability to investigate multiple measures of human behavior simultaneously and at different time scales is essential to understanding how behavior is dynamic, multi-level, and multi-causal.

Digital Data Collection and Testing Dynamic Models

A primary component of this project is the development of a core facility, referred to as a **SuperLab**, equipped for monitoring the physiological and behavioral responses of participants during experimental and observational studies. Data to be collected in this type of lab will include: frame synchronized multi-camera video, multi-channel audio, motion capture, eye movements, electrophysiological measures, such as electroencephalogram (EEG), electromyogram (EMG), heart rate

Science Briefs continued on page 3...



...Science Briefs continued from page 2 (ECG), and respiration, body movements, and bioassays, such as cortisol or oxytocin. Each of these data streams will be sampled at different rates ranging from .01 Hz to 44 KHz, and many will be collected within the same experimental session. Currently, no laboratory in the social or behavioral sciences is equipped to concurrently measure more than two or three responses simultaneously. The SuperLab will enable digital data collection at a scale that far exceeds current practices.

As a specific example of how data collection in a SuperLab will affect the modeling and analysis of time-sampled data, consider how the underlying dynamics of an observable social behavior can be investigated with the acquisition of multiple measures at multiple time scales. In any dynamic system, there are several “state” as well as observable variables that are changing with time, but their relations are rarely measured directly. In this new paradigm, one set of measures will record the temporal features of observable behaviors (i.e., coding of video and audio, eye movements) in social context, whereas a different set of measures (e.g., heart rate, facial EMG, EEG, salivary cortisol) will investigate the “state” variables that underlie these behaviors. By temporally aligning the observed variables with the state variables, new experiments conducted in the SuperLab can move beyond the

investigation of observable variables to incorporate underlying “state” variables and their dynamic interactions with the observable variables.

In theory, this data collection scenario could be implemented today, but the sheer volume of data and number of inputs that need to be controlled and synchronized represents a huge challenge to even the most technically sophisticated labs in the social and behavioral sciences. Our goal is to eventually establish the SuperLab as a public facility that could be shared in the same way as telescopes or particle accelerators are shared by researchers in the physical sciences. As a complement to this lab, we plan to provide an ensemble of network and grid services that will significantly reduce the burden for individual users who want to collect multimodal data or annotate and analyze previously collected corpuses of data stored in centralized or distributed data archives. These software tools and data will be bundled together in a publicly accessible data grid.

Overview of the Social Informatics Data Grid

Data collected in the SuperLab or through any other facility (such as a Brain Research Imaging Center) will be stored in a distributed database with tools provided by our Social Informatics Data (SID) Grid. Consistent with the recommendations

of the Atkins Report², the SID Grid is designed as a multi-tiered architecture for long-term, distributed, and stable data and metadata repositories that institutionalize community data holdings. As can be seen in Figure 1, the types of facilities and services to be provided at the most general level (shaded layer) will generalize across different disciplines and project-specific applications. At the next layer, cyberinfrastructure support will be customized for specific disciplines and projects. Thus, the SID Grid will include both domain general as well as domain specific applications and services.

The goal in developing the SID Grid is to design a resource structure that generalizes to all behavioral and social science research domains by including tools to transform and analyze heterogeneous data types. For example, the National Center for Data Mining (Robert Grossman, Director), which is a partner in this project, has already contributed to the development of XML standards for several common data preparation operations³, and will continue to develop additional standards during the project period with a special focus on data preparation services for transforming time series data and streaming data.

Although we eventually plan to develop a data grid that will generalize across social science domains, it is necessary to begin by focusing on specific domains, because some of the resources required by the SID Grid are specific to the needs of a particular research community. During the initial funding period, we will focus on resources for three specific domains: Multimodal communication, cognitive and social neuroscience, and neurobiology of social behavior in humans and animals. Previously collected corpora and data archives in raw or partially analyzed forms will be integrated into the SID Grid via a translation layer. For example, we have already negotiated with Brian MacWhinney to make

Science Briefs continued on page 4...

...Science Briefs continued

TalkBank and the Child Language Data Exchange System (CHILDES) accessible through the SID Grid. We also plan an interface that will integrate software tools developed by domain experts to provide additional services for annotation and analysis. Annotation tools, such as Elan and MacVisSTA (see Figure 2), will soon be accessible via the SID Grid. Although these tools were created for annotation of multimodal communication, we are planning to expand their functionality so that they will be available for storing, displaying and coding additional types of data, including eye movements, physiological measures, and motion tracking in a time synchronous fashion. Our goal is not to “reinvent the wheel” but to incorporate existing databases and tools that are currently available and make them accessible through a common website. By doing so, we can provide interfaces for using data and tools interchangeably, which will expand applications beyond those that were intended by the original developers.

Collaboration and Standardization

Another motivation for creating the SID Grid is to provide new and more expansive opportunities for collaboration. We are developing a multi-platform, multi-track tool for working with and manipulating time synchronized data. This interface tool, built to use SID Grid services, will provide the means for collaborative annotation and analysis of SID Grid data sets. Results, hypotheses, derived data streams, annotations, and metadata will be available over the Grid to widely distributed communities of collaborators.

The SID Grid will be complemented by support for a virtual collaboration environment based on the Access Grid (AG) version 2.0 software developed by the Stevens’ lab at Argonne National Laboratory and University of Chicago. In essence, the AG is an ensemble of network and computing resources that supports group-to-group human interaction in real-time across the grid.

It consists of large-format multimedia displays, presentation and interactive software environments, interfaces to AG middleware, and interfaces to remote visualization environments.

The Access Grid is already deployed at over 200 research and development sites worldwide. It is being used on a daily basis to conduct distributed meetings, seminars, and virtual conferences. Since the AG is based on open source software and uses the Internet for its streaming data transport, it is not uncommon for groups to leave their AG nodes operational 24 hours a day thereby creating a persistent shared working environment between multiple sites.

The creation of these cybertools will provide some of the needed infrastructure for supporting collaborative research in the social and behavioral sciences. This infrastructure will encourage data sharing and accelerate the development of standards for collecting and coding physiological and behavioral data. For purposes of outreach and dissemination, we are creating a website with tutorials for

using the SID Grid, organizing workshops on use of the infrastructure, and soliciting researchers to conduct multimodal research in the SuperLab. The availability of these databases and software tools could change how we educate the next generation of scientists.

Opportunities and Challenges

The resources and services available through grid computing are already transforming fields, such as particle physics and bioinformatics, but they involve dedicated partnerships between domain experts and computer scientists. If the tools developed for the social and behavioral sciences are to have a comparable impact, then it is necessary that they are designed to facilitate research without prescribing how research should be conducted. This goal represents a delicate balance between meeting the needs of the research communities and developing new tools that are compatible with a grid infrastructure.

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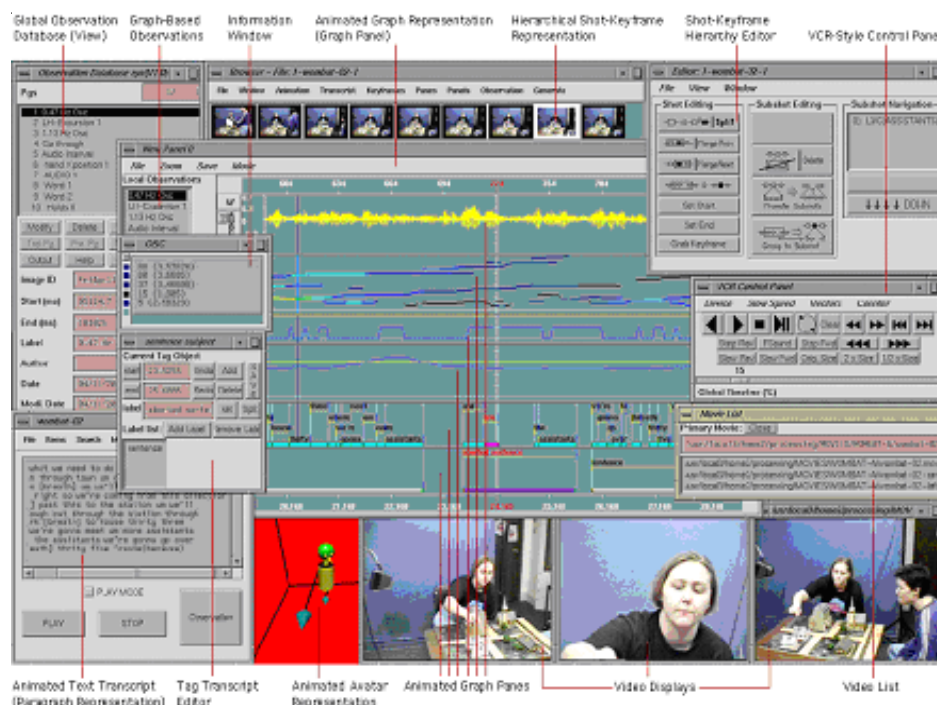


Figure 2. The VisSTA system for situated temporal access to multimodal communicative behavior.

EXECUTIVE DIRECTOR'S COLUMN

STEVEN BRECKLER, Executive Director for Science

The Problem with IRBs

A frenzy is building over the behavior of many Institutional Review Boards (IRBs). Increasingly, we hear horror stories about IRBs that are imposing incredible burdens on researchers, creating bureaucratic nightmares, and otherwise hindering the progress of research.

Many people ask what APA is doing about this. The Science Directorate already supports an office for research ethics and regulation (<http://www.apa.org/science/research.html>). It is an area that we have targeted for growth at APA, mainly in response to concerns in the research community that many IRBs are creating inappropriate difficulty for researchers.

One area in which APA is devoting attention is developing guidance for researchers and for IRBs. For example, the federal regulations specify that expedited review procedures apply for certain kinds of research involving no more than "minimal risk." The problem, of course, is that IRBs interpret "minimal risk" in different ways — there is no uniformity or strong guidance on this. APA convened a workshop last spring, bringing together experts from research ethics, IRBs, and federal agencies to build some consensus on how to guide IRBs in defining "minimal risk." The result will be a procedure that IRBs can use in making "minimal risk" determinations. This particular problem is only one aspect of the current concern with IRBs, and clearly similar and continuing efforts will be needed to make the system work better.

On November 17, the Center for Advanced Study at the University of Illinois released a White Paper on *Improving the System for Protecting Human Subjects: Counteracting IRB "Mission Creep"*. The White Paper



(available at www.cas.uiuc.edu) summarizes the work of a group of ethics and IRB experts, and offers several recommendations for improving the work of IRBs. One of the problems, according to the report, is that many IRBs are taking on responsibilities that interfere with their main mission of protecting research participants.

For me, the most important recommendation of the report is a call for empirical research on the problem — we know very little about how IRBs around the country operate, what they demand, what procedures they classify as minimal risk, and so on. As scientists, we need to be approaching the problem systematically and empirically. We hear sensational stories, but we need to be careful to ground the vivid, attention-grabbing examples against the true base rates. Plenty of evidence suggests that IRBs have crept into areas where they were not intended to go. But we really have little reliable data on the extent or origin of the problem. For example, some have commented that the problem is not with the federal regulations, but rather with the interpretation and application of those regulations. We need to understand the nature of the problem, because some "solutions" may cause even bigger problems.

It is quite remarkable how little we really know about the structure and function of IRBs. APA's own Gerald Koocher has done some important work in this area, and he and collaborator Patricia Keith-Spiegel developed a tool for assessing how investigators perceive IRB characteristics (available at www.ethicsresearch.com). The so-called IRB RAT allows investigators to rate their IRBs on such dimensions as procedural justice, interpersonal justice, impartiality, and competence. With the accumulation of data, we will be in a much stronger position to take corrective action.

Some point the finger of blame at University administrations, who are accused of using IRBs to protect their institutions from lawsuits and bad press. If this is the case, it represents a major failure of Universities to support and enable the research of their faculty. Everyone wants to make sure that human participants in research are treated with respect, beneficence, and justice. When they work as intended, IRBs help researchers achieve this goal. When they get saddled with other responsibilities, IRBs can no longer be ensured of achieving the goal, and they impose burdens that get in the way of research progress.

For the social and behavioral sciences, Institutional Review Boards represent an important infrastructure. We all need to play a part in making them work, and work well. We need to take ownership of IRBs, and we need to make University administrations understand that the success of their faculty depend on well-functioning IRBs.

Leadership Positions Available in APA Science Directorate!

The APA Science Directorate has opened the search for two well qualified individuals to serve in important leadership positions in the Directorate. These are exceptional opportunities for psychological scientists to contribute to the field.

The positions are the Assistant Executive Director for Governance and Leadership and the Assistant Executive Director for Research and Infrastructure. Both positions require doctoral degrees in psychology, with sufficient seniority and experience in psychological science to be able to apply conceptual and related abilities to a broad array of programs.

The **Assistant Executive Director for Governance and Leadership** (job code 05-103) will:

- Provide conceptual leadership and oversight to the development of activities in the Directorate concerned with science leadership, the visibility of science, and applications of psychological science, including testing and assessment, science student activities and relations with Divisions.
- Provide direct supervision to professional staff serving governance groups
- Assist in developing new programs and initiatives consistent with this position
- Represent psychological science in policy and program development venues and to professional organizations consistent with APA activities and policies.
- Provide conceptual framework and supervise coordination of the Decade of Behavior initiatives and activities

The **Assistant Executive Director for Research and Infrastructure** (job code 05-104) will:

- Provide conceptual leadership and oversight to activities related to psychological science issues, including regulatory, policy and IRB issues, authorship, mentoring, teaching and

training issues, ethical issues, animal research issues, infrastructure needs and opportunities. This includes but is not limited to oversight of "Responsible Conduct of Research" activities and initiatives

- Provide direct supervision to professional staff serving governance groups
- Develop new programs and initiatives consistent with activities in the purview of this position, and in the context of service to the Directorate mission.
- Represent psychological science in policy and program development venues and to professional organizations consistent with APA activities and policies

- Provide conceptual input in the development of Directorate training activities (e.g., Advanced Training Institutes) and develop and write grants for funding these and other Directorate activities

Qualified applicants should forward a curriculum vitae and cover letter, including salary requirement and the appropriate job code, to:

APA Human Resources, 750 First Street, NE, Washington, DC 20002-4242; Email: jobs@apa.org; Fax: 202-336-5501. Equal Opportunity Employer.

APA Gives Support to Departments Harmed by Hurricane Katrina

Seven institutions in the Gulf Coast area have been awarded small grants by the APA Science Directorate to assist in their recovery from the devastations wrought by Hurricane Katrina. Some of these departments reported that many assets were damaged or destroyed, including computer equipment, books and journals, and other necessary supplies to conduct research and teach. Funding decisions were made by an ad hoc committee of the Board of Scientific Affairs (Ronald Brown and Sandra Graham) and the Board of Educational Affairs (Mary Brabeck and Cynthia Hudley). Following is a list of the institutions and departments that received these grants from APA.

- ~**Louisiana State University Health Sciences Center**
School of Allied Health Professions, Human Development Center
- ~**Louisiana State University Health Sciences Center**
Department of Psychiatry, Section of Psychology
- ~**Nicholls State University**
Department of Psychology
- ~**Southeastern Louisiana University**
Department of Psychology
- ~**The University of Southern Mississippi Gulf Coast**
Department of Psychology
- ~**Southern University at New Orleans**
Department of Psychology
- ~**Tougaloo College**
Department of Psychology
- ~**Tulane University**
Department of Psychology and Program in Neuroscience

APA Science Directorate and Tomorrow's Professors

by Clare Porac

The APA Science Directorate offers workshops oriented toward preparing advanced graduate students and post-doctoral fellows for the searches for their first academic faculty positions. These workshops use a variety of discussion formats, from formal panels to informal lunch settings, but each format provides the opportunity for aspiring academics to interact with and question experienced faculty members about the good, the bad and the ugly of the faculty search process. An attempt is made to have participant faculty from a variety of university and college settings so that the differences between the search processes and the career demands at different types of institutions can be discussed and compared.

Recently, I had an opportunity to act as the moderator for two academic career workshops. The first was held at the meeting of the Human Factors and Ergonomics Society (HFES) in Orlando, Florida in September, 2005. This workshop was organized with a panel of three faculty members who led the discussion and answered questions

from approximately thirty graduate student attendees. The second workshop was held at the meeting of the Cognitive Development Society (CDS) in San Diego, California in October, 2005. This second event was organized as a luncheon with faculty participants at each lunch table fielding questions from the graduate and post-doctoral student attendees. In both instances, the faculty participants are members of the society that co-hosted the event with the APA Science Directorate.

The issues discussed at these workshops follow at least two thematic tracks. These tracks are independent of the workshop format and are influenced by the major concerns expressed by the student attendees themselves. First, students want to know what they need to do to make themselves competitive in a national search for an academic position. How can I make my application stand out from a field of a hundred other applicants? How many publications should I have? What types of publications are looked at favorably or unfavorably by search committees? Should I have teaching experience and, if so, how do I get teaching experience? How should I write the cover letter to my application? How do I

convey my enthusiasm for my research and/or my teaching? How should I decide which faculty positions to apply for? These are among the many questions that center around the theme of the preparation needed for a competitive and successful search for a faculty position.

The second theme centers around the events and activities that make up the campus interview process when an application results in an invitation to make a campus visit. Students want to know what they will be asked to do when interviewed face-to-face by members of an academic department. How should I present myself? How should I prepare and present my job talk? What is the best way to interact with members of the search committee and other members of the department? What should I do when I talk to deans and other university administrators? How should I go about finding out what the department is really like? If I am offered the position, what items should I include when I negotiate the terms of my appointment?

The strength of these workshops lies in the fact that the faculty participants are frank and open about their own experiences and what each of them has seen transpire in the context of their own departments and universities. Given the diversity of the backgrounds and academic settings of the faculty participants, there is a surprising agreement among them about what is the best way to approach each of the questions posed by the students.

Tomorrow's professors are well-served by the honest and practical advice that forms the basis of the academic career workshops co-hosted by the Science Directorate and participating psychological organizations and societies.

National Center for Health Statistics- New Fellowship

Deadline for Call for Applications:

January 9, 2006

This program brings visiting scholars in health services research-related disciplines to the NCHS to collaborate on studies of interest to policymakers and the health services research community using NCHS data systems. Fellows can access the data resources provided by CDC and participate in developmental and health policy activities related to the design and content of future NCHS surveys.

Each year, up to two individuals will be selected for the fellowship. Applicants range from doctoral students (who have completed course work and are at the dissertation phase of their program) to senior investigators. Applicants must also have training or experience in health services research, be a U.S. citizen, permanent resident, or able to acquire a valid work authorization. Fellows will reside in Hyattsville, MD for a duration of 13-24 months from September 2006 to January 2007.

For more information or to apply visit www.academyhealth.org/nchs.

Friends of NIDA Coalition Presents Educational Briefing on HIV and Drug Use

by Geoff Mumford

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Behaviors associated with drug use have been shown to be among some of the most prominent and robust predictors of HIV transmission in the United States. In fact, injection drug use has directly and indirectly accounted for more than one-third (36 percent) of AIDS cases in the United States. Drug use also affects judgment about sexual risks and thereby increases the likelihood of transmitting or acquiring HIV through unprotected sex. But evidence suggests that drug abuse treatment can help prevent the spread of HIV/AIDS, especially when combined with prevention and community-based outreach programs for at-risk individuals. Because these efforts can reduce or eliminate drug use and drug-related HIV risk behaviors, the Friends of NIDA hosted an educational briefing on Capitol Hill on October 25 to raise awareness about the relationship between drug use and HIV infection.



Robert Booth, Professor of Psychiatry, University of Colorado School of Medicine, describes Project Safe, a NIDA-funded HIV prevention project he has been directing since 1987.

The briefing, entitled “Drug Use and HIV/AIDS: Breaking the Cycle of Infection”, was organized by APA Science Policy staffers Sara Robinson and Geoff Mumford. It was the third in a series this year designed to elevate NIDA’s profile with policy-makers. As with the other events, APA coordinated with the Chairs of the

Addiction, Treatment and Recovery Caucus to find space and drum up support for the briefing, which was co-sponsored by 18 other organizations.

NIDA Director Nora Volkow provided a spirited overview of NIDA’s HIV/AIDS research portfolio, noting, among other issues, the alarming change in patterns of transmission disproportionately affecting African American women. Psychologist Robert Booth, a Professor of Psychiatry at the University of Colorado School of Medicine, described his experiences as an HIV prevention researcher leading the community-based SAFE program in Denver. Finally, Ms. Patricia Nalls, Founder and Executive Director of a DC-based nonprofit organization, The Women’s Collective, provided her personal perspective as an HIV-positive woman helping other women deal with HIV-related issues.

Nominations Requested for Tanaka Dissertation Award

APAs Committee on Ethnic Minority Affairs (CEMA) seeks nominations for the Jeffrey S. Tanaka Memorial Dissertation Award in Psychology, which recognizes work that contributes to a better understanding of the psychological issues and concerns facing communities of color.

Tanaka was an Asian-American scholar and psychologist whose work emphasized the importance of culture and ethnicity in the scientific understanding of behavior. He was a fellow of APAs Div. 5 (Evaluation, Measurement and Statistics) and a member of Divs. 8 (Society for Personality and Social Psychology) and 45 (Society for the Psychological Study of Ethnic Minority Issues). Tanaka was chair-elect of CEMA at the time of his death in 1992.

CEMA welcomes applications from individuals who filed their dissertations in 2004 or 2005. The winner receives a nominal cash award, APA convention registration, a travel award sponsored by the APA Science Directorate to APAs 114th annual convention, and an invitation to briefly present the dissertation to the membership.

The deadline for submission of abstracts is April 1. Please contact the APA Office of Ethnic Minority Affairs (202-336-6029) for more information, or visit www.apa.org/pi.

Board of Scientific Affairs Update

by Liora Pedhazur Schmelkin, Hofstra University

The Board of Scientific Affairs (BSA) held its annual fall meeting in Reston, Virginia on November 3-6, 2005. This year, the Board, which meets twice a year at the same time as other APA boards and committees, extended its agenda and held a one-day retreat prior to the start of the official fall "consolidated meeting." The retreat afforded BSA the opportunity to discuss in depth pressing issues related to science in general as well as APA in particular. Board members in attendance included Roberta Klatzky (Chair), Ronald Brown, Sandra Graham, Jo-Ida Hansen, Hazel Markus, Liora Schmelkin, Norman Spear, and John Weisz.

The Board is very excited and enthusiastic about the upcoming Science Leadership Conference, the first of its kind for the Science Directorate. We discussed at length the various programs and events that are planned and the potential impact that this conference is likely to make. Before this conference even begins, BSA has concluded that it will become a highly anticipated and productive annual event.

Among the many groups and representatives that BSA met with was the Science Student Council, a group of graduate students, formed in 1993, that advises BSA and the Science Directorate on issues related to science-oriented psychology graduate students. This group, which has representatives from the breadth of psychological science, will henceforth be holding its meeting during the consolidated meetings. This will enable it to more formally interact with BSA and with the American Psychological Association of Graduate Students (APAGS), thus fostering opportunities for enhanced communication and joint activities. Other topics discussed and considered during the agenda-packed meeting included convention programming of science sessions, reports and initiatives spon-



From left to right: first row - Roberta Klatzky (chair), Jo-Ida C. Hansen, Hazel R. Markus. Middle row: Liora P. Schmelkin, Sandra Graham, Norman E. Spear. Last row: Ronald T. Brown and John R. Weisz. Not pictured, Marilyn E. Carroll.

sored by other groups within APA, and a highly informative briefing by the Science Policy staff of the Science Directorate that focused on Congress and various funding agencies.

One of the proposals that BSA discussed at length is for the creation of a new task force for increasing the number of quantitative psychologists. The number of quantitative psychologists is dwindling at the same time that there is a pressing need for training and education in all aspects of quantitative methods, including research design, measurement and assessment, and statistical analysis. This is critical so that psychologists can be at the forefront of cutting edge research and be able to inform public policy. In addition, it has become clear that journal reviewers with statistical and quantitative expertise are few in number. Cosigned by leaders from many of APA's divisions, the proposed task force would consider the development of approaches and materials necessary for increasing the number of quantitative psychologists. Following the discussion and endorsement by BSA, representatives from BSA, the Board of Educational Affairs (BEA), and the Publications and Communications

Board (P&C) met to discuss this Council New Business Item and agreed that the formation of a task force was the best way to begin to deal with the problem. BEA requested that the initiative of expanding the pipeline be extended beyond the university level to the high school level.

BSA reviewed the plans for the 2006 Advanced Training Institutes (ATI). Two ATIs, the grant-funded ATI in fMRI with a special focus on data analysis and the grant-funded ATI on the NICHD's Study of Early Child Care, will take place in 2006. BSA also discussed other proposed ATIs and recommended that the following topics be further explored as potential ATIs for 2006 and the future: structural equation modeling in longitudinal research; linking epidemiology, health services research, and geographic information systems (GIS) and psychology; web-based research; state-of-the-art qualitative data analysis; and behavioral genetics.

The Board thanked its outgoing members, Marilyn Carroll, Jo-Ida Hansen, and Roberta Klatzky for their service and selected Ron Brown as its next Chair. In addition, the Board thanked the staff of the Science Directorate for the valuable information that they provide and for their constant support and guidance throughout the year.

Undergraduates: Rev Up Your Applications!

by Jennifer Webb

The Science Directorate's two summer programs for promising undergraduate students are now open for application! Please recommend your most promising students for these incomparable experiences. The twelfth Summer Science Institute (SSI) and the third Advanced Statistical Training in Psychology (ASTP) will again host the cream of the undergraduate crop – please pass this information along!

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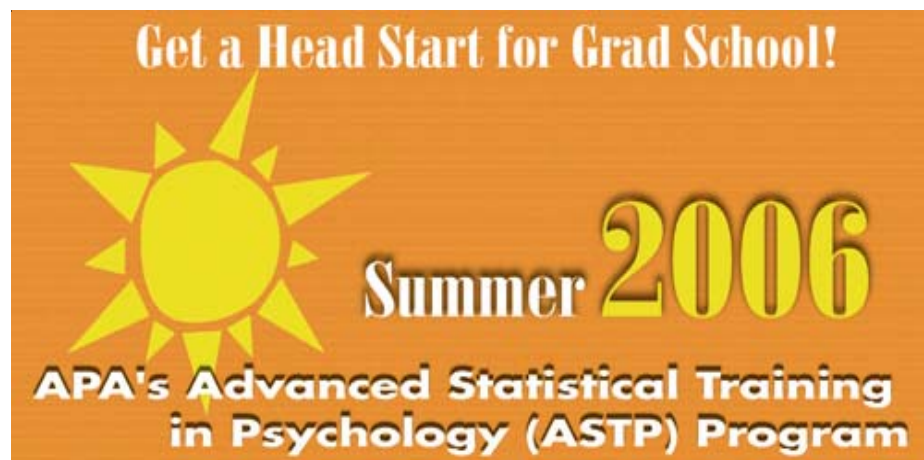
Applications for the Summer Science Institute, to be held at the University of Minnesota June 16 – 25, will be accepted until **February 6, 2006**. At SSI, 32 exceptional undergraduate students will be immersed in the science of psychology. During the intensive session, students will explore the intellectual, personal, and social nature of research in psychology through stimulating group seminars and laboratory experiences.

SSI will stress the importance of the scientific method in psychology. Students will have the opportunity to learn from distinguished faculty at one of the nation's top graduate programs in psychology. Among the topical areas that may be explored are:

biopsychology, social psychology, cognitive psychology, learning and conditioning, health psychology, clinical psychology, and developmental psychology. We'll also cover some important practical topics, including deciding on graduate study and careers in scientific psychology. Please visit www.apa.org/science/ssi.html for complete details about the program and the online application.

Applications for ASTP, to be held at The George Washington University July 8 – 16, 2006, will be accepted until **February 20, 2006**. This program is designed to give rising seniors, who

plan to pursue advanced degrees in psychological science, the opportunity to learn about statistics and research methods in a dynamic setting that emphasizes hands-on computer skills. ASTP targets students from traditionally underrepresented groups in psychology. The definition of underrepresented groups for this program is broad and includes members of ethnic minority groups, first generation college students, and students who have had to overcome other kinds of social, physical or economic barriers on the road to academic excellence. Please visit www.apa.org/science/astp.html for the online application and more program information.



For Additional Information:

Please contact Jennifer Webb at jwebb@apa.org

Psychology and Human Intelligence

by Geoff Mumford

During the last week of October, John Negroponte, the Director of National Intelligence (DNI), took the unusual step of publicly revealing the National Intelligence Strategy of the United States. The Strategy, which calls for “transformation through integration and innovation”, formalizes previous reports that the DNI was planning to shift resources away from technical information collection toward human intelligence gathering. The details are laid out in a series of 15 “mission” and “enterprise” objectives. Science Policy staff were pleased to see that one of those objectives focused on enhanced research as follows: “Exploit path-breaking scientific and research advances that will enable us to maintain and extend intelligence advantages against emerging threats.”

Developing a plan to meet that objective will fall to a physiological psychologist, Dr. Eric Haseltine, the new Associate Director of National

Intelligence for Science and Technology. We wanted the Associate Director to know that APA was here to serve as a scientific resource as those plans evolve, so two days after the release of the Strategy, Science Directorate Executive Director Steve Breckler and Science Policy staffers Geoff Mumford and Heather Kelly met with Haseltine to discuss opportunities for collaboration. At his temporary offices at CIA headquarters in McLean, Virginia, Haseltine spent over an hour providing candid insight on issues ranging from the organizational culture of the intelligence community, stress related to the operational environment abroad, and the role psychology and behavioral science might play in the training of future analysts and operational personnel. Haseltine detailed a number of opportunities for follow-up and Science Policy staff look forward to maintaining a close collaboration with him as his strategic initiatives unfold.

Haseltine brings a unique set of on-the-job training credentials to his current position.

Prior to joining DNI, Haseltine had served for three years in an analogous role as Associate Director for Research at the National Security Agency (NSA), one of the 13 intelligence agencies now grouped under the jurisdiction of DNI. But for more than two decades before joining NSA, Haseltine worked in private industry, first as Director of Engineering for Hughes Aircraft and later as Executive Vice President for Research and Development at Walt Disney Imagineering. Haseltine was recruited and selected for the DNI position by his former NSA boss, General Michael Hayden, who now serves in the number two slot at DNI as Director Negroponte’s Deputy Director.

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APA 2006 Annual Meeting will be held in New Orleans

The 2006 annual meeting of the American Psychological Association will be held in New Orleans, August 10 – 13, 2006, the APA Board of Directors announced today. The Board’s decision to keep the meeting in New Orleans was made by unanimous vote.

APA has been actively monitoring the New Orleans storm recovery, including a site visit on October 31. A number of factors went into the Board’s decision to keep the 2006 meeting in New Orleans, including:

- Parts of the city most critical to our meeting, the convention center area, our convention hotels, and the French Quarter, did not sustain any damage due to flooding and suffered much less serious storm damage than other parts of the city. These areas are well on their way to full recovery;
- Air quality tests conducted by federal, state, and private entities have shown that the air in New Orleans is safe;
- As of October 6, the Louisiana Office of Public Health announced that tap water is safe to drink in the convention center, downtown, and the French Quarter areas;
- In February New Orleans will host its annual Mardi Gras celebration. This spring and summer the city will also host a number of large conventions and society meetings. These events and others are expected to increase staffing and service levels across the city.

For more information about convention planning go to www.apa.org/convention, and as a reminder, convention program submissions are due to divisions on December 2.

Psychologist Roxane Silver Testifies on the Role of Social Science Research in Disaster Preparedness and Response

by Sara Robinson

12 On November 10, Roxane Cohen Silver joined a distinguished panel of social and behavioral scientists to present her testimony as an expert witness at a congressional hearing of the House Science Committee's Subcommittee on Research. Specifically focused on "*The Role of Social Science Research in Disaster Preparedness and Response*," Chairman Inglis (R-South Carolina) convened the hearing to address such questions as: "How do

individuals respond to traumatic experiences, such as terrorist attacks or natural disasters? How can insights into fundamental questions of cooperation, social order and resilience improve preparation for and response to new threats and disasters?"

Silver, a Professor in the Department of Psychology and Social Behavior in the Department of Medicine at the University of California, Irvine,



Roxane Cohen Silver presents testimony before the House Science Committee, Subcommittee on Research at a November 10, 2005 hearing.

presented testimony about her research on how individuals adjust to stressful life experiences. Highlighting findings from her NSF-funded longitudinal study of emotional, cognitive, and social responses to the September 11 terrorist attacks, Silver explained that our assumptions and expectations about the coping process stand in sharp contrast to the research data. As one example of what she calls the "myths" of coping with trauma, Silver explained that "psychological responses are mistakenly assumed to be limited to those *directly* exposed to the trauma, and the degree of emotional response is mistakenly assumed to be proportional to the degree of exposure, amount of loss, or proximity to the trauma." Furthermore, individuals are often expected to adjust within a prescribed timetable, yet few individuals experience an orderly sequence of "stages" of emotional response, and this narrow notion of recovery fails to account for the lifelong nature of the effects of such events. In closing, Silver stressed the critical need for methodologically sophisticated, externally valid research on coping as we reevaluate what it means to psychologically adjust to trauma.

The Nineteenth International Workshop on Methodology of Twin and Family Studies: The Introductory Course

This year's workshop will be held in Boulder, Colorado, March 6 – 10, 2006, with Dr. John Hewitt as local host. Much of the application programming will be based on the package Mx, developed by Dr. Mike Neale for the flexible analysis of genetically-informative data. The Mx home page is <http://www.vcu.edu/mx>. Mike Neale serves as Academic Director for the workshop and is joined by approximately a dozen outstanding faculty from universities around the world. This workshop is funded by the National Institute on Mental Health.

This course is intended to be introductory. Participants interested in more advanced work (e.g., those who have attended earlier workshops) should consider the advanced workshop planned for 2007.

The course will include: Causes of variation; univariate twin analysis; between group heterogeneity; path analysis; analysis of raw data; multivariate genetic analysis; multiple raters; sibling effects; categorical data; power analysis; models of comorbidity; extended pedigrees; developmental models; and an introduction to quantitative trait loci analyses. Hands-on analysis will be emphasized employing networked notebook computers. A course home page has been established at <http://ibgwww.colorado.edu/workshop2006>.

Minority students and scientists are especially encouraged to attend. Partial need-based financial support for US minority participants is available by application to the local host, John Hewitt.

More information may be obtained from John Hewitt, or the workshop secretary, Kendra Locher, IBG, University of Colorado, Boulder, CO 80309-0447, USA; Telephone: 303-735-5440; FAX: 303-492-8063; E-mail: John Hewitt John.Hewitt@Colorado.edu, or Kendra Locher Kendra.Locher@Colorado.edu.

See the hearing charter, witness list, testimony, and webcast here:

<http://www.house.gov/science/hearings/research05/nov%2010/index.htm>

Basic Behavioral Research Gains a Toehold at NIGMS

by Pat Kobor

Frequent PSA readers know that APA has worked for several years to encourage the National Institute of General Medical Sciences (NIGMS) to establish a program of basic behavioral research. NIGMS is considered the basic research institute at NIH. Although it once funded a program of basic behavioral research, the institute moved toward genetic and molecular research in the past ten years, away from studies involving humans.

The arrival of Jeremy Berg as Director of NIGMS over a year ago has brought a more open attitude toward basic behavioral research, but encouragement from Congress is likely another reason that NIGMS is opening up. The U.S. Senate has included non-binding language encouraging NIGMS to begin a program for the past six years. In addition, Reps. Brian Baird (D-WA) and

Patrick Kennedy (D-MA) have met and corresponded directly with NIH leadership encouraging the institute to embrace basic behavioral research. The letter generated by Rep. Baird is the latest example of Congressional efforts to encourage NIGMS to establish a program. PSA went to press before we learned whether the language in the Baird letter was in fact included in the NIH funding legislation for Fiscal Year 2006. Click here <http://www.apa.org/ppo/issues/nigmsltr103105.pdf> to view the letter generated by Rep. Baird.

A recent program announcement from NIGMS shows that the institute is indeed amenable to some types of basic behavioral research. One recent program is to facilitate collaborations between behavioral scientists and investigators with expertise in molecular and genetic studies. The title

of the program is "Collaborative Research for Molecular and Genomic Studies of Basic Behavior in Animal Models." You can see the announcement at this link: <http://grants1.nih.gov/grants/guide/pa-files/PA-06-038.html> Please spread the word so that your departmental colleagues know that there's a new potential source of funding.

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Psi Chi and the APA Science Directorate Announce New Psi Chi Internship Grant

Virginia Andreoli Mathie, Psi Chi Executive Director

Psi Chi, The National Honor Society in Psychology, and the APA Science Directorate are pleased to announce the Psi Chi/APA Science Directorate Internship Grant. This grant expands the opportunities for Psi Chi student members to apply the knowledge they learned in the classroom, add to their knowledge base, practice their professional skills, develop new skills, explore career options, solidify their career goals, and expand their network of professional contacts through their work in an exciting internship setting.

The **Psi Chi/APA Science Directorate Internship Grant** (see http://www.psichi.org/awards/completelist_awards.asp#22) is a collaborative initiative of Psi Chi and the APA Science Directorate that provides an opportunity for a Psi Chi member to do a summer internship at the APA's Science Directorate. The applicant for the internship must be a Psi Chi member who is a rising senior or rising junior majoring in psychology. The 10-week paid internship in Washington, DC will give Psi Chi members the opportunity to gain experience in science administration and learn more about cutting-edge research in psychology. The grant will provide \$2,000 to supplement the salary (approximately \$3,500) paid by the APA. **The deadline for the 2006 summer internship is January 15, 2006.** The cover sheet and submission instructions can be downloaded from <http://www.psichi.org/pdf/apagrant.pdf>.

Psi Chi is the largest student psychological association in the world. Psi Chi has installed more than 1,040 chapters and inducted more than 490,500 members since its founding in September 1929. You can find more information about Psi Chi and its awards and grants program at the Psi Chi web site (<http://www.psichi.org>).

Announcing the 2006 APA Advanced Training Institutes!

by Nicolle Singer

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Sponsored by the Science Directorate, the Advanced Training Institutes (ATIs) expose new and established faculty, researchers, and advanced graduate students to state of the art psychological research methods. The Board of Scientific Affairs guides the course selection every year, focusing on technologies and tools that are increasingly important to psychological research. ATIs tackle the big issues confronting researchers who use (or want to use) these innovative methodologies through discussion, lecture, and lab experiences. Most workshops cover the diverse ways emerging technologies are being applied across psychology, as well as the more specific ways attendees can incorporate these methods into their research areas. More information about the 2006 programs will follow in the next few weeks. Keep tuned to <http://www.apa.org/science/ati.html> for updates on these exciting programs and to apply!

Nonlinear Methods for Psychological Science, July 17-21, 2005, at the University of Cincinnati, Cincinnati, OH. Organized by Guy Van Orden, covering methods of nonlinear analysis. Participants will generate data at the workshop and learn to ways to analyze it for nonlinear structure. Each participant will leave with the experience of having analyzed data for nonlinear structure, and with access to software that will enable them to perform further nonlinear analyses.

Structural Equation Modeling in Longitudinal Research, June 5-9, 2006, University of Virginia, Charlottesville, VA. John McArdle will lead this ATI, designed to highlight recent methodological advances in the analysis of longitudinal psychological data using structural equation modeling (SEM). A range of topics will be covered, including fundamental measurement problems, dealing with incomplete data, and new techniques for dynamic analyses.

New Tools in fMRI Data Analysis, May 21-26, 2006, Charlestown, Massachusetts. This ATI explores the use of fMRI in psychological research, and is led by Robert Savoy, of the Harvard Medical School Department of Radiology. The program covers a broad range of topics in fMRI use and data analysis, with an emphasis on the analysis of data collected in fMRI research.

Using Large-Scale Datasets with the National Institute of Child Health and Human Development, June 5-9, 2006, University of North Carolina, Chapel Hill, NC. This workshop on mining large-scale datasets uses the NICHD-sponsored longitudinal Study of Early Child Care (SECC) database as the exemplar.

Web-Based Research, July 10-14, 2006, at the University of Northern Iowa, Cedar Falls, IA. This workshop will be led by John Eustis Williams, and sessions will cover web-based research, web-based data collection, shared databases, and Authorware, a type of software used to create interactive webpages for experiments. Applications of this technology will also be discussed.

Past Participants Tell All

Feedback from past ATI participants has been overwhelmingly positive. Faculty and graduate students report using their ATI-honed skills regularly. One 2005 participant exclaimed "Without the training I believe that my dissertation would have taken at least another 6 months to a year."

One valuable aspect of the ATI experience that the opportunity to study alongside some of the foremost researchers in your chosen area. Dr. Susan Colligan of the John Muir/Mt. Diablo Health System Neurosciences Institute recalls that "this opportunity has provided a focal point for the next stage of our Neurosciences Institute program."

Similarly, NICHD Large-Scale Dataset ATI attendee Jessica Emick, a PhD candidate at the University of Maryland, commented that "the training provided an unprecedented opportunity to explore a valuable database under the guidance of more experienced and knowledgeable researchers. Their insight about the theoretical and conceptual underpinnings of the research design as well as the nuances of the data was truly invaluable."

NIH Moves to All-electronic Research Grant Application Submission

On December 1, 2005, the National Institutes of Health will begin receiving all research grant applications electronically. All grant mechanisms will transition to this new method over a period of time. The first mechanism to transfer to using Grants.gov (grant submission portal) will be Small Business Innovation Research/Small Business Technology Transfer applications. For information about the timeframe for transition, please visit <http://era.nih.gov/ElectronicReceipt>. For information about Grants.gov registration, software and form navigation, please go to <http://grants.gov>.

...Science Briefs continued

Our approach to achieving this goal is to solicit the advice and feedback of the research communities by recruiting working groups of domain experts who are willing to meet once or twice a year with the developers of the SID Grid to prioritize needs and offer feedback on the tools already developed. We are currently in the process of forming three working groups to assist in the development of specialized tools for multimodal communication, cognitive and social neuroscience, and neurobiology of social behavior, but plan to recruit additional working groups as we expand our efforts in the future. The long-term impact of this project should be a better understanding of how social scientists and computer scientists can work together to develop the field of "social informatics".

¹ University of Chicago: Jean Decety, Gina Levow, David McNeill, Howard Nusbaum; University of Illinois at Chicago: Sue Carter, Robert Grossman, Stephen Porges; Argonne National Laboratory: Ian Foster, Mark Hereld, Michael Papka, Rick Stevens, Michael Wilde

² Atkins, D. E. et al. (2003). Revolutionizing science and engineering through cyberinfrastructure. Report of the National Science Foundation Blue-Ribbon Advisory Panel on Cyberinfrastructure.

³ The Predictive Model Markup Language (PMML) is a vendor supported standard for statistical and data mining models, as well as for much of the data preparation and deployment infrastructure required for creating and using these types of models. See www.dmg.org for more information.

Feb 15 Deadline for Proposals on Giftedness

APF requests proposals for the 2006 Esther Katz Rosen Grants, which award up to three scholars grants of up to \$25,000 per year for three years for research on and programs for gifted children. Renewed funding is contingent upon the submission of an interim progress report and availability of funds. APF offers grants for:

New scholars who would like to pursue research in the broad area of the psychology of giftedness;
Established scholars who would like to begin pursuing work in this field; and
Graduate students who have academically progressed through their qualifying exams and who are working with an established scholar in the area of giftedness.

APF will give special consideration to projects that are innovative and can become self-supporting or lead to external funding. Some preference is given to APA members.

The application deadline is February 15, 2006. To apply, submit a four- to six-page proposal, curriculum vita, and IRB approval to foundation@apa.org. Graduate student applicants must also submit recommendations from a graduate advisor and department chair or director of graduate studies. For complete application guidelines, contact foundation@apa.org or visit www.apa.org/apf. Direct questions to (202) 336-5814.

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Call for Nominations for 2006 McGuigan Prize

In 2006, APF will award its third biennial \$25,000 F. J. McGuigan Young Investigator Prize to recognize the efforts of a young psychological science investigator to explicate the concept of the human mind from a primarily psychophysiological perspective. Physiological and behavioral research may qualify for support, but dualistic approaches, such as those espoused by many contemporary cognitive psychologists, do not qualify for support.

Nominees must have earned a doctoral degree in psychology or a related field and be fewer than 9 years post-doctoral degree at the time of the nomination. Nominees must also be affiliated with an accredited college, university or research institution. The prize will be awarded to the recipient's institution for the benefit of his or her research. Faculty salaries and indirect costs may not be requested.

The deadline for nominations is March 1, 2006. Nomination packages must contain six (6) copies of a nomination package, each package to include: a letter of nomination written by a senior colleague (no self-nominations); 1-2 page statement of accomplishments and plans for the next five years (written by nominee); a curriculum vitae; and two representative publications. Materials should be sent to: APF Frank Joseph McGuigan Young Investigator Prize, APA Science Directorate, at the APA address.

For more information, visit www.apa.org/apf or contact science@apa.org.

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Psychological Science Agenda is distributed free to 30,000 psychologists, members of Congress and their staffs, key officials in federal agencies that fund behavioral research and use its findings, institutional libraries, and science writers in the national media.

To obtain a subscription to *Psychological Science Agenda*, contact the Science Directorate at: American Psychological Association, Science Directorate, 750 First Street, NE, Washington, DC 20002-4242.

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 TDD: (202) 336-6123. E-mail: science@apa.org.

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