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FEATURE ARTICLE

Psychology's Biggest Problems

by Robert Johnson

In its 125th birthday issue, *Science* (July 1, 2005) posed the question "What Don't We Know?" In response to itself, the magazine listed the 125 biggest questions—according to its editors—across the spectrum of the sciences. That bit of editorial hubris set me to wondering what the leaders in our own field might consider the Big Issues in psychology to be.

And, I thought, how better to get that question answered than to ask the most illustrious members of the Society for General Psychology—our own Division One?

The method was simple: I sent email messages to the recently elected Division One Fellows, award winners, and members of the Executive Committee, asking them:

- Considering the discipline as a whole, what would you say is the biggest issue or problem that psychology faces?
- What do you see as the greatest unsolved problem in your specialization within psychology?
- What direction or emphasis do you plan for your own work in the next few years?

I had not fully anticipated the pattern of answers I received. Some respondents focused on the missing pieces of the puzzle of behavior and mental processes—the "What Don't We Know?" issues. The majority, however, surprised me by emphasizing systemic problems within psychology itself, particularly the fragmentation of our discipline into narrow specialties and the discipline's cultural, ethnic, and gender-based parochialism. Let's take a closer look at these two sets of responses, beginning with the latter group.

Michael Wertheimer, an emeritus cognitive psychologist at the University of Colorado and an officer of Division One, led the way, describing "the continuing disintegration of psychology, splintering into more, and more unrelated and independent, subfields." Somehow, noted Wertheimer, we need to find ways of "maintaining some degree of identity as an integrated discipline."



Michael Wertheimer

In a similar vein, new Fellow **David Glenwick** of Fordham University stated that one of our biggest problems involves "avoiding the balkanization of psychology, with most psychologists ending up knowing a lot about a little." An equally important problem, he noted, originates in poor communication between psychologists and laypersons. He urges us to work harder at "disseminating valid knowledge to the public (both policy makers and the average citizen), as there is much misinformation out there."



David Glenwick

In reference to his own specialty, Dr. Glenwick pointed to communication difficulties between scientists and practitioners: "I believe the greatest problem in my specialization—clinical psychology—is the gap between what we know (i.e., empirically supported treatments) and the everyday practice of psychotherapy."

Biggest Problems . . .

Echoing Glenwick's worries about integrating science and practice, new Fellow **Jack A. Naglieri**, Director of School Psychology at George Mason University, remarked:

Psychology as a whole is at an important transition point as the field begins to put more focus on what works, what appears to work, and what we have been doing for a long time that may not work. Defining how to measure what works is equally challenging.

Continuing that theme, Past President (of both APA and Division One) and emerita from the University of Massachusetts, **Bonnie Strickland** stated, "I believe that the greatest threat facing the discipline of psychology is the loss of our scientific base especially within organized psychology." She added:

The biggest problem that I see facing my speciality, Clinical Psychology, is the continued issue of integrating science and practice. We have a number of new and exciting breakthroughs on the science side that have direct and significant importance for practitioners. These are not being effectively communicated. Conversely, practitioners have information that would be important to basic and applied scientists but there is little exchange.

A second issue has to do with the changing face of practice in regard to support. With the advent of managed care, psychologists are being replaced by social workers and Master's level practitioners who deliver the same psychotherapeutic interventions for less money. Well trained clinical psychologists must know how to use the science of psychology and provide a range of services, especially prevention, in addition to psychotherapy.

The proliferation of professional schools without libraries, full time faculties, residency requirement, etc. has led to questions about the quality of education and training for students who attend these schools. We need a Flexner-type investigation to ensure that clinical graduate training programs are of high quality.

New Fellow, **Susan McDaniel**, a clinical psychologist and professor of Psychiatry and Family Medicine at the University of Rochester, lamented: "There are so many unsolved problems that it's hard to pick the 'greatest' one." She did, however, continue the themes of specialization and lack of communication across specialties within psychology—both of which combine to diminish the effectiveness of psychological treatments:

At the organizational level, while we've made strides, I believe psychology would be best served if there was more interaction among family, health, clinical, counseling, and child psychology. We all care about improving the health of people. Too often, we're each off in our own sub-silos, working on related (or even the same) issues, without interaction. I think the intellectual enterprise, as well as service delivery, suffers as a result. We came together to construct a Primary



Jack Naglieri

Care Psychology curriculum, which was very gratifying (and I think the result was much better than if any one of our areas had produced the document alone). Any APA initiative that has to do with health should include all these parties.

In her own area, lying at the intersection of family and health psychology (which she defines as "the effect of family relationships on health, and health on family relationships"), Dr. McDaniel said:

I would like to see all psychology embrace an integrated, biopsychosocial systems approach to human problems and human suffering. This approach provides a conceptual framework for professional psychologists to work as health professionals, as part of a team. Mind-body research is some of the most important being funded at NIH right now. This approach insists that we bring psychology to interdisciplinary, collaborative endeavors, sharing our perspectives and expertise in areas where otherwise it may be missing.

For **George W. Albee**, who is Past President of APA and also the current President of President of Division One, the biggest issue involves the political fragmentation within psychology, particularly between academicians and clinicians within APA:

The problem for our discipline as a whole is the domination of Council by Practice. Practice now controls APA completely. This results in a lack of governmental diversity.... My goal: To try to restore Diversity (of power) to Council.

Dr. Albee, who is Professor-emeritus of Clinical/Community Psychology at the University of Vermont, also emphasized the preoccupation of psychology's applied fields with treatment rather than prevention:

The biggest problem in my specialty (community psychology) and in most applied fields, is the preoccupation with trying to deal with the problems of individual people rather than with trying to prevent the problems in the first place. This is what Justin Joffe has referred to as "The cause of the causes." We set up programs to enhance self-esteem, to make better schools, better housing, better motivation—all the result of grinding poverty, instead of doing something about poverty! I think this reflects an obvious preoccupation in our society with individual treatment and cure rather than with prevention. Public Health has long known that a disease is NEVER treated out of existence. Somehow this fact cannot penetrate. We keep up costly efforts to find a CURE for cancer, a CURE for Alzheimer's, a CURE for coronary artery disease, a CURE for bipolar disorder etc. Even if we found cures, the conditions would not decline. We have had a CURE for syphilis for years but the disease persists.

Joan Chrisler, Professor of Psychology at Connecticut College and new Fellow of Division One, concurs:

I think that the biggest problem psychology faces has to do with the sociology and politics of our discipline: will we continue to stand together as psychologists, or will we split into



Susan McDaniel



Bonnie Strickland



George Albee

separate disciplines as neuroscientists, clinical practitioners, and “the rest of us”? The splintering of the field is tragic, and it has already happened to some psychology departments in the U.S. That’s why I am grateful for the presence of Division 1—to remind us that we have much to learn from each other and by integrating theory and data from our various subfields.

For **Esther Rothblum**, professor at San Diego State University, psychology’s disconnect from real problems faced by real people was the issue of most concern:

Psychology has become so U.S./U.K. based that even psychologists trained in other countries do not develop a good understanding of issues facing their communities. The field seems to be becoming narrower, doing studies that are methodologically intricate yet that bear little relationship to real people’s experiences. . . .

In women’s studies, she said, real people’s experiences are a moving target:

In the field of lesbian, gay, bisexual and transgender issues, the language, identity, and focus of the various subcultures/communities are changing so rapidly that it is difficult for researchers (who are usually older and out of touch with the cutting edge of the communities) to stay current.

Psychology’s parochialism also worried newly elected Fellow **Barbara Rogoff**, professor of developmental psychology at UC Santa Cruz:

Expanding research beyond the middle-class European-American samples that have been used extensively so far, in order to be able to make more general statements about human development without basing them on just one cultural group (the one that most researchers are most familiar with, so they often don’t even think of it as a cultural group).

For **Howard Tennen**, of the University of Connecticut’s Department of Community Medicine & Health Care (also Membership Chair of Division One), the real problem arises from a mind set that emphasizes funding over scholarship:

I think that the biggest issue in my area (health psychology) and perhaps in the discipline as a whole is the growing acceptance of a “big science” (and in some respects “big business”) academic mentality. It seems to me that funding has replaced scholarship as the leading indicator of work quality, and that psychologists have begun to diminish the value of unfunded or modestly funded scholarship. Even teaching colleges are chasing indirect costs from grants, and faculty are rewarded heavily for bringing in dollars. Department chairs and deans seem to know far more about their faculty’s grant “portfolios” than they know about the substance



Joan Chrisler



Esther Rothblum



Barbara Rogoff

of their faculty’s scholarship. Rather than rewarding excellent scholarship that is most cost efficient, i.e., most “bang for the taxpayers’ buck,” psychology has joined hard science in valuing the biggest grants with the largest indirect costs. A side effect of this transition is to even further diminish the value of teaching (no indirect costs), which has already taken a rather serious beating. What concerns me most about this phenomenon is that it’s insidious—as our colleagues come to accept the big science model they become oblivious to its “collateral damage.”

And, wouldn’t you know, the longest response came from an APA presidential candidate. I must quickly add, however, that it was a most thoughtful response: **Sharon Brehm**, a newly elected Fellow and professor of clinical and social psychology, Indiana University Bloomington, began by pointing to our “reputation deficit,” which she explained as follows:

Every psychologist I know complains, at some point or another, that psychology suffers from invidious comparisons with other sciences.

For example, where is our Nobel Prize? Other large fields in academe (such as chemistry and literature) have their own designated category. . . .

Of course, there are many less prestigious slights that can have a great deal more impact on our everyday endeavors. Consider, for example, the unfortunate and long-standing competition and sometimes even animosity between clinical psychologists and psychiatrists. This past spring, the California Department of Health Services promulgated new regulations that extend psychologists’ authority to admit patients and supervise their care. In the wake of these rule changes, which were forwarded to the Office of the California Secretary of State, it is quite possible that the Union of American Physicians and Dentists will file a lawsuit against the state seeking to reverse the decision by CDHS.

Even our popularity as a field can manage to embarrass us. For example, few of us are thrilled to be represented to the public by Joyce Brothers or Dr. Phil. And sometimes those hoards of undergraduates who are so eager to take our psychology classes seem to confirm our worst fears. Perhaps we are too popular, too easy, too soft. This view may be shared in high places. For example, it took much work by many people—including a number of prominent psychologists and APA’s Science Directorate—to help ensure that NIMH funding for basic behavioral research was continued. Hopefully, the relevant priority area in the Division of Neuroscience and Basic Behavioral Science [“Elucidate fundamental mechanisms (e.g., genetic, biological, behavioral, environmental) of complex social behavior”] will now be strongly supported by the Institute. But it will take awhile for psychologists to be confident about the strength of the Institute’s commitment.

And then there’s Rep. Randy Neugebauer (R-TX). For the second year in a row, Rep. Neugebauer was able to gain enough support to pass an amendment denying funding to two psychological research projects that had been approved through the regular peer-review process. Fortunately, it seems likely that, once again, the Neugebauer amendment will not make it out of the Senate/House conference committee. Nevertheless, this repeated assault on peer-reviewed psychological research is extremely disturbing and likely to continue. According to Neugebauer, the projects he has targeted should

be stripped of their funding in order to “save federal funding for serious mental health research.”

Despite the challenges we face, however, this is an incredibly exciting time for our field. Psychology is rapidly becoming a central integrative science, with increasingly strong ties to other fields (e.g., biology, sociology, information, political science) and an expanding range of applications. In light of the growing complexity of our discipline, I believe it would be useful to convene some thoughtful, cross-sector discussions about how we can better communicate with the public (and, to some extent, among ourselves) about psychology’s range and its enormous contributions (past, present, and future) to understanding human behavior and increasing human well-being. As the Association’s first division, with its uniquely integrative mission, the Society for General Psychology would seem the most appropriate group to call us together. We do not need to circle the wagons, at least not yet, but we would all benefit from developing a more united front.

As for her own specialty, Brehm says the difficulties also involve fractionation:

Not surprisingly, the greatest unsolved problem in social and personality psychology is the same as the greatest unsolved problem throughout the history of all of psychology: How do we connect the various aspects of human psychology into a coherent whole? In social and personality psychology, this means trying to get our arms around the causes of behavior, cognition, emotion, and motivation as well as their effects. Some of the most fruitful areas of social/personality psychological research, such as attitudes and persuasion, have been so exciting and productive because they can encompass the “big four” just listed, as well as their interactions. And yet there is always the tendency to want to focus more narrowly, more precisely, and avoid all that noise inherent in complex variables. In fact, both lenses—wide and narrow—are valuable, both are necessary, and social/personality psychology seems to have a well-tuned self-regulatory system that manages to keep both perspectives in play. Nevertheless, I always worry that the clarity of the minor key will trump the fuzziness of the major key. Fortunately, however, every time I begin to believe that ambitious, far-reaching theoretical work has gone the way of the dinosaur, some new, intriguing theory comes along, accompanied by impressive empirical findings obtained by exceedingly clever research methodologies. We will never put all the pieces of the “social animal” together, but dedicated efforts to fashion an understanding of at least some robust combinations lie at the heart of psychology’s most revelatory insights into the nature of human kind.

Setting aside psychology’s systemic problems for a moment, let’s turn next for a look at the responses falling in the “What Don’t We Know?” category. Here we find **Dr. Jack A. Naglieri**, whom we met earlier, calling for a broader understanding of intelligence and intelligence testing:

The concept of intelligence has been one of the most important contributions psychology has made to society, yet the tests used to measure intelligence and the very way



Sharon Brehm

intelligence has been conceptualized is largely unchanged since the early 1900s. In recent years there have been several new approaches that have been proposed such as those by Sternberg, Gardner, and new approaches to intelligence that have been operationalized by tests published by Kaufman and Kaufman (Kaufman assessment battery for children; Kaufman & Kaufman, 2004) as well as Naglieri and Das (Cognitive Assessment System; Naglieri & Das, 1997). One of our greatest contributions is also one of our greatest unsolved problems—that is, “Just what is intelligence?”

More specifically, professor Naglieri adds that he plans to work on both theory and practical products:

My efforts over the next few years will focus on the PASS theory of intelligence, which my colleague J.P. Das and I have written about and which we have used to operationalize the cognitive assessment system. I will also continue my efforts to provide measures of intelligence that are more appropriate for culturally and linguistically diverse populations which includes the CAS but also my work on the Wechsler nonverbal scale of ability (Wechsler & Naglieri, 2006). Finally, I will continue to work closely with the Deveux Foundation on measures of resilience and emotional / behavioral strengths.

Health and family researcher **Susan McDaniel**, whose comments on organizational problems in psychology we considered earlier, also gave an epistemologically flavored response, calling for a broader perspective on health and disease:

At the scientific level, we have interesting evidence that relationships matter to health outcomes (for example, marital quality may predict outcome after a heart attack better than cardiac status). We need to understand the mechanisms that result in these effects, and we need to continue to develop couple and family interventions that are effective for health problems affected by relationships (such as Steve Beach’s couples intervention for depression).

McDaniel’s plans for the immediate future involve “finishing a book about family dynamics and genetic conditions (Miller S, McDaniel S, Rolland J & Feetham S. *Individuals, Families, and the New Genetic Era: A Biopsychosocial Approach*, Norton).” She went on to say that the issues posed by the coming developments in genomics “is an area that is crying out for more input from psychology.”

Another health researcher, **Joan Chrisler** (who, you will recall, also mentioned some systemic problems) highlighted a spate of empirical issues about which we know relatively little:

I like to tell my students that my main interests (health psychology, psychology of women and gender) didn’t “exist” when I was an undergraduate. It has been very exciting for me to watch those subfields develop and to contribute in small ways to their integration through my own work on women’s health. There is so much that we don’t yet know about women’s health that it is difficult to pick out the one greatest unsolved problem. Some examples of things that need investigation are: how patients cope with chronic illnesses (e.g., lupus, interstitial cystitis) that have been under-researched in the past because they are diagnosed primarily in women; the roles of stress, environmental factors, comorbidities, gendered behavior, and endocrine action in the etiology of illnesses that primarily affect women; the effects of popular culture on healthy embodiment; the role of the media in conveying information (and misinformation)

about women's health.

Dr. Chrisler noted that menstrual issues are of special research interest:

One of my main areas of research is attitudes toward menstruation and menopause, including how those attitudes are formed and transmitted, how they affect women's self-concept and reproductive experiences, and how they affect men's attitudes toward women. A particular interest of mine is PMS. I have documented the existence in popular culture of a stereotype of premenstrual women (I call it "the menstrual monster"), and I am now engaged in a series of studies to try to understand (using social cognition theories) how women can continue to hold a view of premenstrual women that is so exaggerated that it doesn't describe themselves or anyone they know. It's a difficult problem, which should keep me busy for a while.

Some other issues associated with sexuality fascinates **Bruce Ellis**, Associate Professor of Family Studies and Human Development at the University of Arizona and winner of the Society's George Miller Award (for the most outstanding recent article in general psychology). Dr. Ellis stated:

Perhaps the most enduring mystery surrounding human sexual development and behavior is its variation. Some individuals complete pubertal development by the 5th grade while others are still relatively undeveloped when they graduate from high school; some begin sexual activity and reproduction as teenagers while others delay having children until decades later; some pursue short-term relationships with multiple partners while others commit to a single partner for life. My research seeks to understand the developmental causes and function of this variation. Using evolutionary theory as a framework for studying gene-environment interactions during development, a central focus of my work is on how life experiences affect the timing of sexual development (which was the question I addressed in the article that won the George Miller award). This actually turned out to be a very challenging question—one that required a synthesis of theory and data from a wide range of areas in the behavioral and biomedical sciences.

Ellis' plans for future research expand on this theme of sexual development:

My primary professional goal for the future is to try to untangle gene-environment interactions in understanding sexual development. That is, I am fundamentally interested in uncovering, through careful descriptive and experimental research, a high-resolution map of the regulatory mechanisms involved in development of alternative sexual and reproductive strategies. For example, I am currently studying the effects of family disruptions on the regulatory mechanisms involved in pubertal timing.

Then he adds, parenthetically and puckishly:

When I was young and single, I used to study sexual fantasy. Then I got married and turned my attention to love and commitment. Then I had children and began to study the effects of the family on child development. It is of much

concern that I am now becoming a divorce researcher!

The important knowledge issues for some of the remaining respondents may also be found in plans for their own work in psychology over the next few years. For **Howard Tennen**, the most interesting questions lie in the interaction of nature and nurture:

It appears that I will move toward examining gene-behavior-environment interactions in predicting risky behavior, particularly problem drinking among young adults. My colleagues and I have been impressed with our preliminary findings in this area, and I suspect this may be a major focus of my work during the next few years. I hope that in this work we'll be able to wed genetics, psychology and public health. This line of inquiry requires cross-disciplinary collaboration and a break from the idea of a single PI.

Finally, with regard to the direction of his work over the next few years, **David Glenwick** sagely observed, "I once heard an interview with Laurence Olivier in which he said that his goal was 'to do good work.'" And what is his working definition of "good work?" Glenwick plans to continue investigating "moderators of the relationship between stress and adjustment problems in various child and parent populations."

So there you have the Big Issues, both systemic and scientific, according to some of the leading figures in Division One. But perhaps you are wondering what *Science* magazine considered to be the major questions relating to psychology. As I interpret the list, 21 of their 125 are relevant to our discipline:

- What is the biological basis of consciousness?
- What genetic changes made us uniquely human?
- How are memories stored and retrieved?
- How did cooperative behavior evolve?
- What synchronizes an organism's circadian clock?
- How do migrating organisms find their way?
- Why do we dream?
- Are there critical periods for language learning?
- Do pheromones influence human behavior?
- How do general anesthetics work?
- What causes schizophrenia?
- What causes autism?
- To what extent can we stave off Alzheimer's?
- What is the biological basis of addiction?
- Is morality hard-wired into the brain?
- What are the limits of learning by machines?
- How much of personality is genetic?
- What is the biological root of sexual orientation?
- What gave rise to modern human behavior?
- What are the roots of human culture?
- What are the evolutionary roots of language and music?

I certainly have no quarrel with any of those items as being among the Big Questions in science—or in psychology, for that matter. But I do question whether this list adequately represents the most important issues in our field. Significantly, there is scant overlap (*zero*, to be precise) between the *Science* list and that of the items proffered by our distinguished psychological panel.

I must admit (near the end of this piece where fewer readers may see it) that I may have inadvertently biased the responses of my survey with the wording of the queries: by using the terms "issue" and "problem." Undoubtedly, I would have received more responses about our areas of ignorance had I asked for the biggest "questions" or "gaps in knowledge." That potential flaw not-



Bruce Ellis

Biggest Problems . . .

withstanding, the responses of our psychological panel should still give us occasion for reflection.

Nor, of course, can we expect the editors of *Science* to give a whit about the problems of fragmentation, politics, and parochialism within psychology, even though these are issues of legitimate concern within our field. But as for the discrepancy in the basic science listings, let's do a little compare-and-contrast exercise.

Science's list reflects the assumptive bias that answers to the big questions about behavior and mental processes will lie in biology. By contrast, our own experts' list spans the spectrum from biology to cognition to culture. As psychologists, we realize that addressing important questions often requires taking multiple perspectives. (In fact, the notion of multiple perspectives may be among psychology's greatest contributions to knowledge—and the hardest one to communicate to nonpsychologists.)

In this vein, then, I will end this piece with a few more questions posed with the intent of demonstrating that an understanding behavior and mental processes requires perspectives that span many levels:

- How can we understand and deal effectively with terrorism?
- Is prison abuse the result of "a few bad apples" or a "bad barrel"?
- What are the effects of family, peers, and culture on poverty, crime, mental disorder, politics, achievement, intelligence, creativity . . . ?
- What are the most effective approaches to teaching and learning?
- What are the roots of prejudice, and how can we deal with it?
- What is the nature of love?
- Why do we like great art, good stories, fine wine, excellent music, and the world's great cuisines—and why do our tastes in these matters change?
- How can we communicate what psychology is about to our peers in the other sciences and to the general public?



Past as Prologue: The Division One Convention Program

All accounts counted the Division One program at the 2005 APA Convention a rousing success.

One of the reasons for our success, I believe, lay in the diversity and wide appeal of presentations—consistent with the mission of Division One, The Society of *General Psychology*. The proof lay in the numbers: The Invited Addresses by Steven Pinker, "The Blank Slate: The Modern Denial of Human Nature"; Frans de Waal, "Our Inner Ape: What Primate Behavior Tells Us About Human Nature," and Richard Nisbett, "The Geography of Thought: How Asians and Westerners Think Differently and Why," each had attendance in the 350 range, typically with standing room only. As our goal is to unify the many specialties within the field, programs that bring many people together can help us move toward this goal.

Another component of our program that I believe had great value, as well as great interest, was the debate over prescription privileges. Not only was this a timely topic, but the debate itself opened up an opportunity for dialogue and further discussion among people with differing philosophical views. It is a credit to our division that we can promote such open dialogue, bringing people of differing views into civil contact within our divisional programming. I am hopeful that we will again receive proposals for next year's program that will also allow for such debate and dialogue.

At our Executive Committee meeting, discussion centered on the need to bring younger people into the division, including graduate students. There have been some ideas that are being discussed by some members of our division that will allow this to occur, including a presentation that would bring humor to our program. I also wonder whether the Division should rethink its stand on poster sessions as part of our program. A poster session does not cost us any program hours and is a wonderful way to encourage senior projects and graduate students to see themselves as professional members of our division. This could be done for next year. Even though our Call for Papers states that we do not provide poster sessions, we received a number of proposals for this year's program and we could also co-sponsor such sessions with other divisions. Please let me know what you think about this possibility.

Another aspect of our program that we will probably change next year is our awards program. Traditionally, this has been held as part of the business meeting, but we are considering merging this program with the New Fellows Reception, making that reception more of a recognition event: recognizing new fellows, award winners, outgoing officers and others of distinction. Opinions are welcome on this topic, too.

The major goals of our 2006 program will focus on providing a blend of programs that address research and practice. We will also attempt to provide some programs geared to attract graduate students as well as programs that address a variety of interests within the profession. All members of Division 1 are encouraged to discuss programming ideas with me and to submit proposals for the 2006 program—by the deadline of December 2, 2005. Details for submissions are in the September Monitor and on-line at <http://www.apa.org/convention06/>.

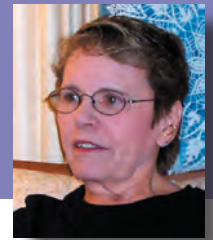
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Why and How to Vote for APA President

by MaryLou Cheal - Arizona State University and President of the Coalition for Academic, Scientific, and Applied-Research Psychology of APA Council



MaryLou Cheal

Why Vote for APA President? The president of APA is the most influential individual in APA. This is the one person who can have the most influence on the things that you want APA to do for you and for members of your group(s). Often members who are not involved in APA governance think that they do not know the candidates and it does not matter if they vote. The next paragraph is for you.

How to Vote for APA President: In this case it is really how to choose your candidates. First, one must decide which candidates on the ballot will support one's own goals and then to rank order those candidates. In APA one does not just vote for one candidate and think that is it. It is important to rank the candidates because of the Hare system that is used by APA. When the votes are received, the number of #1 ranked votes for each candidate is noted. The one with the fewest votes is dropped. At that point the #2 ranked candidate for those voters is given their votes. Thus, if your #1 candidate is dropped, your vote still counts. This process continues until one candidate gets a majority of the votes cast. It is usually on at least the third or fourth count that the president is decided.

So which candidate should you choose? I find the best method, if you do not know the candidates, is to read what they have done. What they say they will do is less useful, because the president must be everything to all members so all say they support academia, practice, and science. But what have they done? If they have spent most of their career in academia, then they will likely support the things that academics want. The same can be said for practice activities, and for research activities. Thus, I pay much more attention to what candidates have done than to what they say.

The five candidates were all invited to submit a short paragraph on how they would support the goals of Division 1. Below are statements from three of the five candidates; one of the others declined the invitation and I have not heard from the other. Both Sharon Brehm and Bruce Overmier are Fellows of Division 1 and Tom Vaughn is a member. The candidates statements below are presented in alphabetical order.

Sharon Brehm writes:

As the first and founding division of APA, the Society for General Psychology has the role of "creating coherence among psychology's diverse specialties." This mission is of particular importance in a time of fragmentation and divisiveness. I have always been a bridge-builder: teaching and conducting research in both clinical and social psychology; serving as an academic administrator; and actively participating in a wide range of organizations working on behalf of psychology, education, and the arts. (Additional information about my background, experience, and priorities can be found at: www.brehm4apa.com). Here are just



Sharon Brehm

a few examples of cooperative ventures that can help bring us together:

1. All of APA's constituencies are affected by the policies and actions of legislators and agencies at the state and federal levels. We must establish stronger partnerships in advocacy, with educators, practitioners, and scientists working together on behalf of important issues for psychology.

2. The division's newsletter, *The General Psychologist*, is described on the division's Web site as "the best newsletter in psychology." I fully agree. Indeed, *The General Psychologist* seems to me to be psychology's version of *The New York Review of Books* (though thankfully much shorter!). *The GP's* recipe for success combines a psychological perspective with a well-informed interest in major contemporary issues. APA as a whole should follow this example and be much more active in articulating the perspective of psychology on major public policy issues of the day. Developing APA's capacity to become a highly respected, high-profile think tank would greatly enhance the ability of psychology to contribute to the public good.

3. We live in an age of evidence-based almost-everything. For the first time in human history, we are able to store vast amounts of information and make this information easily available to the public. Psychologists are leaders in EBP, not only as researchers who provide evidence and practitioners who make use of it, but also as cognitive and information scientists who contribute to the development of user-friendly tools to locate the desired information. Indeed, the greatest difficulty for evidence-based practice of any sort is to stay up-to-date in the skills required for using access tools and evaluating the quality of the information obtained. As a scientific and professional society, publisher, and continuing education provider, APA has an indispensable role in this complex, rapidly changing enterprise.

4. Telehealth is another area in which technology creates a need for collaboration among psychologists. We do not have sufficient understanding of what sorts of telehealth programs and modalities would be effective in responding to patients' needs. The potential of telehealth to reach underserved populations is significant and requires extensive cooperation among health care practitioners and scientists, both basic and applied. Telecommunication devices and methodologies also have great potential to be useful in many other types of psychological practice, such as consulting and industrial-organizational.

5. As described in Clyde Prestowitz's *Three Billion New Capitalists*, the United States faces an enormous challenge in staying competitive in a rapidly changing world. For example, US students perform relatively poorly in math and science. In the 2003 Trends in International Math and Science Study, the US ranked 14th and 8th, respectively. Before 9/11, much of the math-and-science gap was covered by international students who studied in the US and many of whom stayed permanently in the US. Now increasing numbers of international students

Presidential Election . . .

study in other countries (such as Australia) or remain in their home countries, which are developing their own higher education infrastructure, advanced technology industries, and world-class scientific research. So what does all this have to do with psychology? The answer is straightforward: We must discover how to teach math and science more effectively to U.S. children – especially women and non-Asian minorities. We cannot afford to forego the participation of large segments of our population in this high stakes competition.

APA's greatest difficulty, for at least the last 20 years, has been in forging a sense of common identity. I believe that if APA engaged in more of the kinds of cross-cutting initiatives that I have described, the association would enhance its internal cohesiveness and its external influence. APA needs to be – and be seen as – an exciting, cutting-edge, innovative organization that people want to be part of. This can be done.

Katherine Nordal writes:

Katherine Nordal, Ph.D. is a full time independent practitioner, APA Fellow, and member of Divisions 42, 31, 35, 41 and 29. She is Chair of APA's Committee for the Advancement of Professional Practice (CAPP), Trustee of APA's Insurance Trust, former member of the APA Board of Directors (2001-03), and former APA Congressional Fellow. Dr. Nordal has chaired the Committee on Rural Health, and represented Mississippi on the APA Council of Representatives. She is past president of the Mississippi Psychological Association and the Brain Injury Association of Mississippi. Nordal is an active advocate and supporter of AAP/PLAN, the Psychology Defense Fund, and Women in Psychology for Legislative Action.



Katherine Nordal

Candidate Statement: I believe that a primary role of the APA president is to be a strong and vocal advocate for our profession and the individuals we serve. APA has many important messages, but not enough messengers! Our Government Relations, Public Policy, Public Education and other staff work hard for us every day...but that's not enough to get the job done. As a former Congressional Fellow, I know we can make a tremendous difference in the marketplace of public opinion. As individuals, we must all do our part. Advocacy is about developing relationships so our messages will be heard. I will work with APA staff, state association and division leaders, and other well-known psychologists to create timely opportunities for psychology's voice to be heard on the Hill, in the media, and at other tables where we must have a place. For the long haul, however, we must train more psychologists in advocacy and public policy skills and systematically integrate a policy and advocacy curriculum into our graduate programs. The future of our profession depends on it!

As a former APA Congressional Fellow, I recognize the critical importance of psychology's having a strong public policy and advocacy agenda and that will be the focus of my presidential initiatives. Please understand that these ideas are in the de-

velopment stage at this point in time. Once elected they may be refined or modified depending upon political climates and the financial and human capital resources available within APA. The following are my current ideas about specific activities within a broader policy and advocacy presidential initiative:

1. Development of a public policy and advocacy curriculum and text for graduate students adoption of such a course by graduate training programs. The development of policy and advocacy skills must start early...at the graduate level of training. Policy and advocacy skills are critical to their roles as a psychologist, regardless of their work setting, and the future of our profession depends upon our continuing ability to influence policy makers.
2. Development of training models and infusion of more resources for policy and advocacy training for all psychologists (educators, scientists, and practitioners) at the state level. I plan to work with the APAPO's Government Relations Staff, the Education Directorate, APA's Public Policy Office, and the Science Directorate regarding training curriculum products and implementation of such training at the national and state association level.
3. Ongoing recognition of psychologists doing policy and advocacy work: recognition of our Congressional Fellows and the work they do; recognition of psychologists from across the country for their public policy contributions; recognition of psychologists who hold policy positions in federal and state government, etc., in an effort to raise awareness of our members about the potential breadth of advocacy and policy opportunities for psychology and to recognize and thank those who are out there doing that work already.
4. A possible fourth initiative will involve an association wide, cross-directorate policy and advocacy campaign for improved behavioral health services to an underserved population, such as children. A critical issue for poor youth, especially youth of color, is access to services. We must take mental health services to youth where they are...in schools, primary care settings, and juvenile justice settings. To address financial access issues we must advocate for expansion of the Children's Health Insurance Program and lobby actively at the state level for stability in Medicaid funding for mental health services I support expansion of the NHSC loan repayment programs to provide incentives to attract psychologists into underserved areas. APA, through its Public Policy Office and Governance Relations Office, must provide guidance/model legislation for advocacy at the state level where these issues are determined.

For more information, or to contact Dr. Nordal about issues of concern to you, please visit www.DrNordal.com."

Bruce Overmier writes:

The President of APA needs to respect and represent all of psychology and all of APA's constituencies disciplinarily. I believe I have demonstrated a balanced respect and support for all of psychology. Although primarily an academic and laboratory scientist, I have also carried forward projects with patient populations, and I was a licensed psychologist for nearly twenty years. I am committed to building a mutual respect

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between laboratory science and practice and advancing them both together.

I considered the opportunity to be president of the Society for General Psychology (APA Division 1) a special opportunity to express my commitment to psychology as a unified discipline. It is, but we do need to work to unite those working within the several branches of our discipline—fostering the mutual respect due for our several contributions. We do need each other to succeed as a discipline. Teachers of psychology need the promise of interesting careers to attract bright and able students; researchers need the promise of applications of their science to justify the public support of their research; practitioners need the science-based evidence (and that goes well beyond RCTs) to provide tools and validations of their applied work; and all need the public's belief in our discipline which is only impaired by internecine disputes.

Having co-chaired with Dr. Dorothy Cantor the special Task Force on Integrating Science and Practice, I believe I have learned some positive steps that can foster the unity needed to make our discipline maximally effective for we psychologists and for the benefit of the public weal.

Governance Experience: I have had substantial governance experience within APA that will help me carry out the responsibilities of the office of the president. These include:

- APA Task Forces (I and II) on Representation on Council of Representatives (that brought representation for all states, territories, and provinces!)
- Board of Directors' Subcommittee on Finance
- President' Working Group on 'Changing Healthcare Scene'
- APA Task Force on Science-Practice Integration
- APA Board of Publications and Communication
- APA Board of Scientific Affairs
- APA Council of Representatives (elected to 3 terms)
- APA Task Force on Federal Research Support
- APA division officer for nearly twenty years
- National Academy of Science's US National Committee for Psychology (past chair)
- Governing Board of Psychonomic Society
- Board of the Federation of Behavioral, Psychological, and Cognitive Sciences

My Research Integrates Basic Science with Applications: My current research has several lines. One studies the mechanisms of memory in both animals and people. Recently we have extended our research findings to help both learning-disabled persons and patients with Korsokoff's Syndrome to solve short-term memory problems that impair their everyday life. Another line deals with psychosomatic disorders; it springs from our seminal initial finding of "learned helplessness" years ago and currently focuses on stress as a cofactor in gastric ulcer. My recent book with Dr. Marilyn Carroll is entitled "Animal Research and Human Health: Advancing Human



Bruce Overmeir

Welfare Through Behavioral Science." Indeed, I think science and practice need to be integrated in all we do because we are stronger together than separately. APA is the vehicle for this integration.

Recognized Scholar: For 2 years, I was a Sigma Xi National Distinguished Lecturer where I gave talks around the country. The theme of those talks was "From the laboratory to the clinic." I have won federal research and training grants for 30+ years. I served as Editor, Associate Editor, and on the Editorial Boards of several journals for 20 years. I have published nearly 200 scholarly papers, chapters, and books. I have received several recognition awards for my science contributions.

An Activist and Advocate at All Levels: I have worked for my profession and for psychology as a discipline in many ways. These include:

- Individually: A member of AAP and donor to PLAN. A donor to APA Foundation.
- Locally: Past-President of the American Association of University Professors
- Past-President of the Research Society of America (Sigma Xi)
- State: Committee member of Minnesota Psychological Association and Co-founder and Treasurer of a MnPA division for academics.
- Regionally: Past-President of Midwestern Psychological Association
- Nationally: Member of the Executive Committee of the Federation of Behavioral, Psychological, and Cognitive Sciences that established the Foundation for the Advancement of Behavioral and Brain Sciences.
- Internationally: Past-Deputy Secretary General. Past member of the Executive Committee and currently President of the International Union of Psychological Science that fosters psychology's position among all of the sciences internationally.

Diversity: Throughout the decade of the 90's, I devoted my summers as the unpaid volunteer Director to a special training program for undergraduates to groom them for graduate study—virtually all of whom were women and half of which were persons of color—with the goal of broadening representation and participation in psychology. Some 200 students were served in this program

A Plea: I have worked to earn your trust and confidence. I ask you for your first place vote in the election for President of APA. If you cannot give me your first place vote, please give me your second place vote—but in all events, do vote. Thank you for your time in considering me for this position of trust and service."

You can learn more about Bruce Overmier at (<http://www.psych.umn.edu/faculty/Overmier.htm>)

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Division One also urges you to vote for President of APA. Vote the candidates of your choice...but VOTE! Ballots will be sent to APA members on Oct. 14, and the election will close on Nov. 28.

A Word from Our President:

Tramping Around Old Battlefields

George W. Albee, PhD, ABPP

The post-war (WWII) history of APA reminds me of the fable about the Bedouin and his camel. Most readers remember how the camel, out in the cold desert night, pleaded successfully for room in the warm tent for his cold nose. Gradually with more pleading, the camel managed to get more and more of his body into the tent until finally there was no room for the Bedouin, who found himself out in the cold! The fable ends without revealing what eventually happened to the Bedouin or the camel. Most probably the Bedouin would find another tent and the camel would starve. Unless both compromised.

Before WWII, American psychology was mostly academic-scientific. When I was a college freshman (1939), the first lectures in Introductory Psychology stressed the scientific base of the field. Research design, lab courses, and statistics were a big chunk of the major. On our own time we read Freud.

Before and immediately after World War II, most American psychology was experimental/quantitative/physiological. Most PhD psychologists were male WASP professors. Vacancies were filled by hiring each other's students. A few psychologists worked in schools and state institutions. During the war many psychologists were drafted to do counseling, testing and research in military settings. After the war there was a major expansion of clinical training as the Veterans Administration (VA) offered financial support and internships in their expanding clinics and hospitals. Psychology flourished as work expanded. Because the American Medical Association would not permit enlarging the output of MD's, more and more jobs for psychologists and social workers appeared as fewer psychiatrists were trained.

In 1951, I accepted a job as Assistant Executive Secretary of APA. The APA Central Office in DC included Fillmore Sanford the Executive Secretary; me; Margaret (Mrs. Harry) Harlow who was production editor and proof reader of all the APA journals; Jane (Mrs. Harold) Hildreth who handled membership, ethics, and history/archives; an accountant, a shipping clerk, an office manager, and three secretaries. Later we hired a science writer, Mike Amrine half-time to do PR. Our suite of offices was a third floor (walk-up) of the old AAAS building. It was not air conditioned! The Board of Directors and the Policy and Planning Board were composed of academics. Graduate students completed a masters thesis and doctoral dissertation that involved hypothesis testing with newly collected data. Competence in two languages was required, though sometimes competence in statistics could substitute for one language.

At Board Secretary Eddie Newman's insistence, APA did not pay for Board members' alcoholic beverages!

While scientific orientation continued in psychology, compromises were frequent as faculty with meager research credentials had to be hired to teach clinical courses. The dominant (psychiatric) model was "organic defect" – though a few distinguished European psychoanalytic stars (like Eric Fromm) came to America to enlighten us.

The research dissertation was eliminated as a requirement for the PhD. The foreign languages were eliminated. The Psy D appeared. As psychology's numbers expanded with the growth of clinical training and many clinical psychologists ventured into the private office practice of psychotherapy, frequent demands

on APA gradually changed the Association. The center of gravity was shifted from science-dominated to practice-dominated. Under pressure primarily from New York and California practice groups, APA fought for licensure, for independent practice and, ominously, for financial coverage under medical insurance.

With graduate admissions based on competence and ability more Jewish students were admitted, though women and minorities were still excluded.

In 1969-70, the Black Psychologists and Women Psychologists broke the White Male dominance and brought increased diversity to the field.

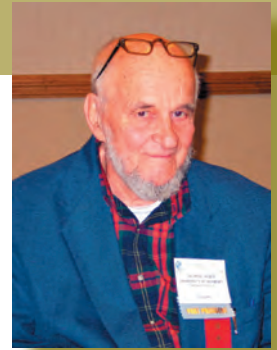
By the mid '80s, those in practice had near-control of APA. A serious attempt to find compromises to keep science, practice, and social justice groups together in a sort of confederation failed, largely because of opposition to the required by-law changes by practice. The scientists left to form their own society. The camel was left!

APA has become a practice-dominated organization. Practice solidified its control by giving a seat in Council to Canadian Provincial Associations, to Puerto Rico, the Virgin Islands, and Guam, all practice dominated. (The neglect of the Marianas and American Samoa is unexplained.) Practice now controls 76% of Council seats.

Now, new young doctoral recipients are not joining APA. In earlier times eligible students joined because their academic mentors were active in APA. Most of these connections have been severed or frayed.

An important task of Division 1 is to find ways of pulling the Association together, of finding or developing ways of "tying together psychology's disparate sub-fields."

Can APA be saved? Let us hear from you.



George Albee



ANNOUNCEMENTS...

GOLD MEDAL AWARDS

The American Psychological Foundation (APF) invites nominations for the APF 2006 Gold Medal awards. The awards include a medal, \$2,000 (to be donated by APF to the charitable institution of the winner's choice), and an all-expense-paid trip for the award winner and one guest to the 2006 APA convention for two nights and three days. (Coach round-trip airfare, and reasonable expenses for accommodations, and meals for two individuals will be reimbursed.) The Gold Medal awards recognize life achievement in and enduring contributions to psychology. Eligibility is limited to psychologists 65 years or older residing in North America. Awards are conferred in four categories:

- Gold Medal Award for Life Achievement in the Science of Psychology recognizes a distinguished career and enduring contribution to advancing psychological science.
- Gold Medal Award for Life Achievement in the Application of Psychology recognizes a distinguished career and enduring contribution to advancing the application of psychology through methods, research, and/or application of psychological techniques to important practical problems.
- Gold Medal Award for Enduring Contribution by a Psychologist in the Public Interest recognizes a distinguished career and enduring contribution to the application of psychology in the public interest.
- Gold Medal Award for Life Achievement in the Practice of Psychology recognizes a distinguished career and enduring contribution to advancing the professional practice of psychology through a demonstrable effect on patterns of service delivery in the profession.

Nomination Process: Gold medal award nominations should indicate the specific award for which the individual is nominated and should include a nomination statement that traces the nominee's cumulative record of enduring contribution to the purpose of the award, as well as the nominee's current vita and bibliography. Letters in support of the nomination are also welcome. All nomination materials should be coordinated and collected by the chief nominator and forwarded together in one package. (Note: There is no nomination form.)

The deadline for receipt of complete nomination materials is December 1, 2005; complete nomination packets may be emailed to Foundation@apa.org or mailed to the Gold Medal Awards Coordinator, American Psychological Foundation, 750 First Street, NE, Washington, DC 20002-4242.

The Arthur W. Staats Award

The Society manages this American Psychological Foundation award given for creative synthesis, the building of novel conceptual approaches, and a reach for new, integrated wholes. The Staats Award has a unification theme, recognizing significant contributions that serve to develop psychology as a unified science. The winner will agree to give an address at the subsequent APA convention and to provide a copy of the address for publication in *The General Psychologist*. The Staats Lecture will deal with how the awardee's work serves to unify psychology. Nominations or the Arthur W. Staats Lecture to be given in 2007, should be sent to Peter Salovey, Department of Psychology, Yale University, 2 Hillhouse Avenue, PO Box 208205, New Haven, CT 06520-8205.

For more information, see the Society's website at apa.org or contact: Nancy Felipe Russo, Awards Coordinator, Society for General Psychology, Department of Psychology, Arizona State University, Box 1104, Tempe, AZ, 85287-1104; e-mail: nancy.russo@asu.edu.

CHARLES L. BREWER DISTINGUISHED TEACHING OF PSYCHOLOGY AWARD

The American Psychological Foundation (APF) invites nominations for the APF 2006 Charles L. Brewer Distinguished Teaching of Psychology Award.

THE AWARD: The awardee receives a plaque, a \$2,000 check, and a two-night, three-day, all-expenses-paid trip to the American Psychological Association's (APA) 2006 annual convention, where the award will be presented.

REQUIREMENTS: The award recognizes a career contribution to the teaching of psychology. The APF Teaching Subcommittee selects a psychologist for the award who has demonstrated:

- Exemplary performance as a classroom teacher;
- Development of innovative curricula and courses;
- Development of effective teaching methods and/or materials;
- Teaching of advanced research methods and practice in psychology; and/or
- Administrative facilitation of teaching;
- Research on teaching;
- Training of teachers of psychology;
- Evidence of influence as a teacher of students who become psychologists.

APPLICATION PROCESS: Nominations should include the APF nomination form, a statement illustrating how the nominee fulfills the guidelines of the award, and a current vita and bibliography. Letters of support are welcome. All materials should be coordinated and collected by the chief nominator and forwarded to APF at the same time.

The deadline for receipt of materials is December 1, 2005. Requests for nomination forms and completed nomination packets should be mailed to the APF Charles L. Brewer Teaching Award Coordinator, 750 First Street, NE, Washington, DC, 20002-4242. Requests for nomination forms may also be sent to foundation@apa.org.

DIVISION ONE AWARDS

- **The William James Book Award** - nominations materials should include three copies of the book (dated post-2001 and available in print); the vita of the author(s) and a one-page statement that explains the strengths of the submission as an integrative work and how it meets criteria established by the Society. Specific criteria can be found on the Society's website (<http://www.apa.org/about/division/div1.html>). Textbooks, analytic reviews, biographies, and examples of applications are generally discouraged. Nomination letters and supporting materials should be sent to William James Book Award, c/o Harold Takooshian, PhD, Psychology-916, Fordham University, New York NY 10023. Email: Takoosh@aol.com.
- **The Ernest R. Hilgard Award** for a career contribution to general psychology - nominations packets should include the candidate's vita along with a detailed statement indicating why the nominee is a worthy candidate for the award and supporting letters from others who endorse the nomination. Nomination letters and supporting materials should be sent to Bonnie Strickland, 558 Federal Street, Belchertown, MA 01007. Phone: 413-323-5778; Fax: 413 545-0996.
- **The George A. Miller Award** for an outstanding recent article in general psychology - nominations packets should include: vita of the author(s), four copies of the article being considered (which can be of any length but must be in print and have a post-2000 publication date), and a statement detailing the strength of the candidate article as an outstanding contribution to General Psychology. Nomination letters and supporting materials should be sent George W. Albee, 7157 Longboat Dr. N., Longboat Key, FL 34228.

All nominations and supporting materials for each award must be received on or before February 15th. For more information, see the Society's website at apa.org or contact: General Psychology Awards, c/o Nancy Felipe Russo, Awards Coordinator, Department of Psychology, Arizona State University, Box 1104, Tempe, AZ, 85287-1104; e-mail: nancy.russo@asu.edu.



Editorial

If you could have a long conversation with anyone in the world, who would it be?

Editing *The General Psychologist* is like having that fantasy come true: I have the perfect excuse to approach any of the Big Names in psychology, including my personal heroes, and pose virtually any question that comes to mind. (I must say, one of the most wonderful things I have discovered about our field is that nearly everyone has been gracious and cooperative.)

In developing the lead article for this issue, I asked a number of prominent psychologists what they believe to be the biggest issues or problems in our field. The results were both candid and a little surprising. I suspect you will find their responses as fascinating as I did.

Another article in this issue of *TGP* grew out of my suspicion that the null-hypothesis testing controversy is an important issue—and one on which I have achieved near-total ignorance. Accordingly, I brazenly asked Peter Killeen, an expert on such matters (and a very clever and lucid writer) to do an article that even I could understand. After a lot of cordial give-and-take, I think I finally got it. Killeen's article should help you, too, to achieve null enlightenment.

And thanks to the duo of Anns (Weber and Ewing), I have a new list of provocative books and movies recommended by psychologists I know and admire.

Thanks, too, to Chris Green and the popular RetroReviews column he edits: My circle of prominent acquaintances with whom I can spend a few hours now extends to the greatest figures in the history of psychology. Last time in RetroReviews I had the opportunity to meet Edwin G. Boring. In this issue, it's Francis Galton.

Then, because I've always wondered what they do over at Division 36, I just asked Robert Emmons and Raymond Paloutzian to write a piece explaining their specialty, the psychology of religion. Again, I think you'll agree that they did so admirably. In the next issue, we'll see what those pesky consulting psychologists are up to.

What are your own questions—the ones you would like to ask the leaders in our field during, say, a 3-hour luncheon conversation? Send them to me, and I will pose at least some of them in future issues of *The General Psychologist*.

—Bob Johnson, TGP Editor



Bob Johnson

RetroReviews: History You Can Use

In each issue of *The General Psychologist*, a professional historian of psychology is invited to write a short commentary on a significant work from psychology's past. The aim is to help set the often alien-sounding words and ideas of our intellectual forebears in their historical context and make them more comprehensible.

We hope that those who teach the history of psychology will bring some of what we offer to their classrooms, but the intended audience is broader than that: general psychologists from all backgrounds who simply have an interest in learning more about where their discipline has been, and where it might be going.

On the following pages, **Raymond E. Fancher** looks to an important work by one of early psychology's most controversial figures—**Francis Galton**. The magazine article "Hereditary Talent and Character" is where Galton first presented his contentious ideas about the implications of Charles Darwin's theory of natural selection for humans—ideas which influenced events of the 20th century in ways that would have left Galton himself breathless.

Dr. Fancher is professor emeritus at York university in Toronto. His publications include the books *Pioneers of Psychology*, *Psychoanalytic Psychology: The Development of Freud's Thought*, and *The Intelligence Men: Makers of the IQ Controversy*. He is currently working on a biography of Francis Galton.

One can find the Galton's original article on-line at the Classics in the History of Psychology Web site: <http://psychclassics.yorku.ca/Galton/talent.htm>.

—Christopher D. Green, York University



Christopher Green

Galton: "Hereditary Talent and Character"

by Raymond Fancher, York University



Raymond Fancher

Francis Galton's "Hereditary Talent and Character," a two-part article that appeared in the 1865 *Macmillan's Magazine*, marked its author's first serious entrée into the world of biological and psychological theorizing. The 43-year-old Galton had already made a name as an explorer, geographer and travel writer—but spent the early 1860s contemplating the implications of his cousin Charles Darwin's recently published evolutionary theory. A number of ideas coalesced and were outlined in this article, which his biographer Karl Pearson called "an epitome of the great bulk of Galton's work for the rest of his life" (Pearson, 1914-1930, Vol. 2, p. 86). Here, in rudimentary form, were the ideas and techniques that would preoccupy Galton for nearly half a century, and that would secure his reputation as a biological and psychological pioneer.

For biologists, the article is notable because in it Galton ruled out the inheritance of acquired characteristics, at a time when most evolutionary theorists including Darwin himself believed that the "use or disuse" of specific organs could lead to inheritable variations. And of prime interest to psychologists, Galton first asserted here that psychological and intellectual characteristics are inheritable just like physical ones, and he defended this notion with some statistical analyses of similarities within families and some crude comparisons of biological versus adoptive relatives – both techniques that, in more sophisticated form, would lie at the heart of the field of behavior genetics.

Inspired by Darwin's theory, Galton also argued that the future evolution of the human species is highly dependent upon these inheritable psychological variations, and that the process of evolutionary improvement might be deliberately accelerated by encouraging the most psychologically and intellectually fit to intermarry and breed children at a higher rate than the rest of the population. Here was the basic idea although not yet the name for what Galton later called *eugenics*. Galton further suggested that examinations might be designed to select those most promising young men and women who would become the parents of the new eugenic population. Without specifying the exact nature of these measures, he provided here the original inspiration for intelligence testing; accordingly, it is no coincidence that the subjects of intelligence testing and the nature-nurture controversy have been inextricably intertwined ever since.

Despite its interest as a harbinger of Galton's later scientific work, "Hereditary Talent and Character" was an imperfect and far from a typical scientific article. The *Macmillan's Magazine* in which it appeared was a semi-popular periodical more noted for literary than for scientific coverage. As readers can see for themselves, it was long on assertion and short on proof, and contained a surprising number of lapses and illogicalities. It opened lamely, for example, by arguing that domestic animals *could* be bred for general intelligence and thus could serve as a model for Galton's eugenic ambitions with humans—but then admitted that this seemingly simple experiment has never been done, presumably because superintelligent pets would be too troublesome to deal with.

After presenting his statistical data showing that, of 605 eminent men listed in a biographical dictionary, 102 were father, son, or brother to someone else on the list—a proportion enormously greater than chance—Galton acknowledged that environmental as well as hereditary factors might have played a role in producing this tendency for eminence to run in families. But then Galton blithely asserted that "beyond the advantage of a good education," the environmental factors are "more than neutralised by those influences which commonly lead... to idleness and dilettantism" (p. 161). He offered no hard evidence to support this claim and concluded, "Everywhere is the enormous power of hereditary influence forced on our attention" (p. 163). (His disclaiming clause, "beyond the advantage of a good education" is worth noting, however, because throughout his career Galton's hereditary arguments pertained primarily to those intellectual differences that remain *after* optimal education has been applied, in the same way that stable differences in physical performance remain among athletes after they have all received comparable training.)

The second part of Galton's article will undoubtedly strike the modern reader most strongly for its stereotyped and unflattering descriptions of various racial groups, in-

cluding not only Native Americans and the “typical West African Negro,” but also Americans of European descent who presumably inherited the “restless character” of their founding forebears, and accordingly were genetically disposed to be “enterprising, defiant and touchy; impatient of authority; furious politicians; very tolerant of fraud and violence” (p. 325). Elsewhere (Fancher, 2004) I have considered at length the role of racial prejudice in Galton’s life and thought, and concluded that it was a significant but not a decisive factor in leading him to his theory of hereditary genius.

More important, I believe, were a variety of personal and emotional issues that preoccupied Galton in the early 1860s. Previously an orthodox Anglican who believed in the literal accuracy of the Bible, his traditional faith was challenged and then broken by the implications of Darwin’s theory, as well as by the agnosticism and “scientific naturalism” of men such as Herbert Spencer, T.H. Huxley, and John Tyndall, with whom he had increasing personal contact throughout the early 1860s. These men argued strongly against the acceptance of traditional theological doctrines, but in favor of a more broadly “religious” attitude based on reverence for nature and an appreciation of scientific laws.

Darwin’s sudden emergence as a major scientific figure, surpassing in reputation even his and Galton’s famous common grandfather Erasmus Darwin, undoubtedly added a personal dimension to Galton’s awareness of the tendency of eminence to run in families. But this was complicated by a further personal factor, namely the increasingly evident fact that his own marriage, to a highly intelligent woman with a distinguished family of her own, was destined to remain childless. Unlike Darwin, who had fathered ten children, the oldest of whom were already showing their own signs of intellectual giftedness, Galton would never be able to contribute biologically to the eugenic society he was just beginning to envision.

This combination of philosophical, religious, and personal factors rendered his new eugenic vision not only powerful and compelling, but also conflict laden and disturbing. Immediately after the publication of “Hereditary Talent and Character,” Galton suffered a severe emotional breakdown that compelled him to retire completely from society, and from almost all intellectual work, for the better part of three years.

Only gradually did Galton regain control over both his emotions and his intellectual processes. In the late 1860s he compiled a much more extensive and systematic catalog of eminent relatives, subdivided into thirteen categories of accomplishment, and analyzed according to his growing mathematical expertise with the Gaussian distribution, and presented this material in his 1869 book *Hereditary Genius*. Although showing some of the same bias towards hereditary explanation and not entirely free of invidious racial characterizations, this book made a much more solid case than his 1865 article, and was favorably received by Darwin, Wallace and other leaders of the evolutionary movement.

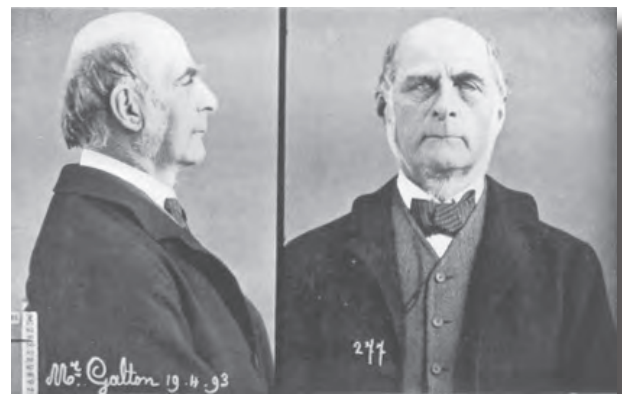
The conclusion to the book showed that Galton now attached a broadly religious significance to his hereditary theory: “There is decidedly a solidarity as well as a separateness . . . in all lives whatsoever; and this consideration goes far, I think, to establish an opinion that the constitution of the living Universe is a pure theism” (1972/1869, p. 428). For the rest of his long life, Galton would pursue his eugenic vision as a literal “secular religion” (see Fancher, 2001), and in a state of emotional equanimity he would fulfill many of the projects dimly or confusedly foretold in “Hereditary Talent and Character”: twin studies and the correlation coefficient as behavioral genetic investigatory techniques, a detailed theory of the mechanism of hereditary transmission that precluded the

inheritance of acquired characteristics, and a concrete program of anthropometric intelligence tests, to name just a few. He introduced the now commonplace catchphrase “nature and nurture” to encapsulate the interplay of heredity and environment, and although he consistently emphasized the importance of the former he did not altogether deny the effects of the latter. It is needless to say that heated debate about the relative importance of the two factors continues to rage today, often centering about the interpretation of results from modern twin studies and other investigatory techniques originally invented by Galton.

In conclusion it is worth noting that in Galton’s 1865 article and throughout the rest of his life he primarily espoused what may be called “positive eugenics”—the identification and promotion of presumably beneficial qualities within the population. He gave relatively less emphasis to the implicit negative side of that coin—the inhibition or prohibition of breeding by those deemed unfit. When eugenics first became truly influential and popular in the early 1900s, however, it was the negative side that predominated. Widespread fears of impending degeneracy and the swamping of the fit by the unfit (created by numerous social factors beyond the scope of this review), led to tests intended to identify the mentally deficient, and eventually in many jurisdictions to the segregation and/or involuntary sterilization of those so identified. These attitudes culminated in the enormities of Nazi genocide. Although Galton was long dead by that time and would undoubtedly have been appalled by them, they represent the unintended dark side of his legacy and are a major reason that the word eugenics bears such negative connotations for many today.

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Francis Galton

tea-Tests

by Peter Killeen, Arizona State University

Few subjects in psychology elicit greater fear among students, and greater ambivalence among faculty, than statistical inference. It's difficult enough to get the calculations straight; then deciding what you can infer from the printout is like reading tea leaves in a room full of tasseographers: Whatever one concludes, another will gainsay; and a deep sense of hocus pocus pervades the whole affair. Psychologists can avoid tea leaves, but, alas, they can't avoid *t*-tests.

Last semester a student dropped by my office to discuss her data. She had failed to replicate a reliable result from the literature. Despite a healthy effect size, the small number of subjects kept her *p*-value above the magic point-oh-five. I explained that her results actually lent some support to the original claim, as her relatively large effect was in the correct direction. She asked "How much support?" and I held my fingers apart a little bit.

Forthwith she set about collecting reams of data and came back with a highly significant *p*-value, pleased to be able to reject the null hypothesis. I explained that she couldn't do that. All she was permitted to do was to act surprised at the deviation of the data from what was expected under the null hypothesis. For her $p < .01$, in fact, she was entitled to act quite surprised. She acted quite surprised.

"If I can't use statistics to draw conclusions about my hypothesis" she sniffed between stifled sobs, "then why do you teach all those statistics classes?" I explained that placebos can be very effective; but only if we believe in them. Now, as a behaviorist, I know that it takes rats only a couple of trials learn to avoid situations of pain or frustration. Students are smarter. She left.

Nickerson (2000) provides a none-too-brief breviary of the many ways in which null hypothesis statistical tests (NHST) are misunderstood. They are misunderstood both because they involve inverse inference, a problematic endeavor, and also because they are often mischaracterized in widely used texts (Cohen, 1994). Nickerson's authoritative sixty pages may lead readers to suspect that there is something fundamentally wrong with an inferential system that text-book writers can't get right. If the probability is much less than .05 that NHST will ever permit conclusions concerning hypotheses, shouldn't we do more than act surprised? Shouldn't we reject NHST?

Inverse Inference Given a fair coin, what is the probability of 8 heads in ten flips? That's direct inference. It is straightforward to compute because its downhill, from a stipulated population parameter ($p(H) = .5$) to a sample statistic. But now consider a coin that landed heads in 8 out of 10 flips. What is the probability that it is fair? That's inverse inference, and it is complicated because it is uphill, from a measured statistic to a population parameter. Our answer must depend in part on whether the coin came from our pocket, or from that of a guy trying to make a bar-room bet with us; just how we flip it, and so on, and on.

Such considerations are called *priors*, or *conditionals*, or *givens*. If I tell you that it's a fair coin to start, those priors are all taken care of, assumed, "given" by assertion. In the real world, however, such assumptions eventually need justification, and

that justification involves inverse inference: You need to go up before you can go down.

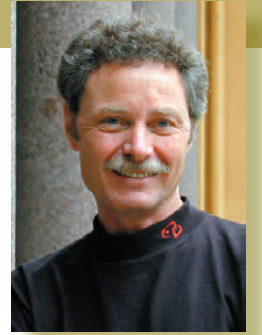
Fisher-Neyman-Pearson statistics—what most of us use most of the time—provide optimal estimates of the probability of observing some statistic given an assumption, hypothesis, or parameter (unbiased coins, null hypothesis, $p = .5$). Call those probability estimates $p(d|a)$, with *d* the data, and the conditional $|a$ the given assumptions. Predicting *d* given *a*, $p(d|a)$, is simple direct inference. Going the inverse direction, to the probability of an assumption given the data, $p(a|d)$, is possible, but only with yet more assumptions. Bayes showed that we can make the conversion if we have estimates of the baserates: the prior probability of the assumption (that the coin was fair to start) and the prior probability of the data (the probability of 8 heads in 10 flips of coins in general).

Neither of these priors is easy to establish. But without them, as Fisher warned, "Such a test of significance does not authorize us to make any statement about the hypothesis in question in terms of mathematical probability" (Fisher, 1959, p. 35). That's why my student couldn't legitimately reject the null hypothesis, given her data. I patiently explained this to her when she finally stuck her head back in. She suggested that the prior probability of her hypothesis was close to 1.0, but when I winced, she left again, before I could explain that she also needed the prior probability of her data. I haven't seen her lately.

Prior Priors Based on the work of Reverend Bayes and Pierre-Simon Laplace (who attended a Benedictine priory school), modern Bayesians have attempted to provide the necessary prior probability distributions (see, e.g., Lee and Wagenmakers, 2005). Because we often have little or no information about the prior probability of a hypothesis, the problem of how to express ignorance mathematically must be solved. Bayesians have designed machinery that incorporates all the information that we do have about the priors, and are otherwise mute.

But critics read their lips, arguing that there is no way that they can be dumb enough. No sooner had Laplace harnessed Bayes' theorem for scientific analysis than George Boole cautioned: "When the defect of data is supplied by hypothesis [about the prior probabilities], the solution will, in general, vary with the nature of the hypothesis assumed; ... I hope that a question, second to none other in the theory of probabilities in importance, will receive the careful attention it deserves" (Boole, 1854, as cited by Fisher, 1936, p. 248).

Despite its importance, and despite the careful attention it has received, there is no agreement on the answer. Many have attempted to untie this Gordian knot; most famously Fisher with his patient but inconclusive work on "fiducial probabilities." Many have cut the knot, but still couldn't get the old cart to move. Others have turned their backs on the antiquity, fast in its temple, and found a different wagon to ride.



Peter Killeen

A Different Wagon We can evaluate research claims much more directly by giving up any attempt to determine parameters or to reject hypotheses. “Sure,” you smile, “give up our goals and achieving them is no longer a problem. Isn’t the whole purpose of research to either prove things—or, after Popper, to disprove them?” Whose goals? Rejecting null hypotheses has been a sirens’ call that has seduced too many scientists, to their delusion and their field’s discomfiture.

Think of great advances in science, and few cases of NHST come to mind. Pasteur did not reject the null hypothesis that life can start spontaneously: He found maggots when the lids were off and not when they were on. Could he have done a *t*-test, would it have strengthened his claim? Darwin did not reject the null hypothesis of speciation without variation and selection; nor is it clear he ever could have. Watson and Crick did not reject the Null Helix Hypothesis. Skinner did not train dogs to jump through hoops significantly more often than chance.

Medical trials measure relative risk reduction; if negligible, the procedure is not pursued, whether or not the improvement is significant. When medical researchers take traditional statistical inference too seriously, they are as chagrined by its results as we (Ioannidis, 2005). “Proof” originally meant a test that provides evidence concerning a claim. All that data provide is evidence. There are better ways to use that evidence than in doomed attempts to prove or disprove hypotheses. We can use it to predict whether our results will replicate.

Replication Statisticians and scientists alike embrace replicability as an inferential goal. As Cohen (1994) said, “Given the problems of statistical induction, we must finally rely, as have the older sciences, on replicability” (p. 1001). Predicting replicability is easier than asserting or denying the truth of hypotheses. Getting on board this wagon is also easy, because we need merely rebadge some of the basic statistics that we already know. There are two steps to the process: Determine the sampling distribution of replicates, and then define what we want “replication” to mean.

1. Consider the left bell curve in the top of Figure 1. It is the sampling distribution of a statistic under the null hypothesis. Randomly select 5 Lipton® tea bags from a box, and weigh each. Do the same with 5 Salada® tea bags. Plot the difference in average weights on the *x*-axis. Repeat this many times and the histogram will look like the top right curve. Such sampling distributions form the basis of most inferential tests we use. The mean of a sample, M , can be predicted from (or serve as an estimate of) the mean of the population μ . The variance of the sample, s^2 , can be used to estimate the variance of the population, σ^2 . Sampling distributions are often normally distributed with mean m and variance σ^2/n . They are used to predict how often a statistic such as a mean, a difference of means ($M_E - M_C$) or an effect size (mean difference divided by standard deviation: $d_1 = (M_E - M_C)/s$), will take a particular value.

NHST typically sets the expected value of these statistics to zero (e.g. $H_0: d_1 = (\mu_E - \mu_C)/\sigma = 0$), or no real difference in weight of tea bags in our experiment, as in the left curve in Figure 1. If experimental and control samples were chosen from the same population this has to be true, because the population has a single mean, μ . But our measurement or experiment may have

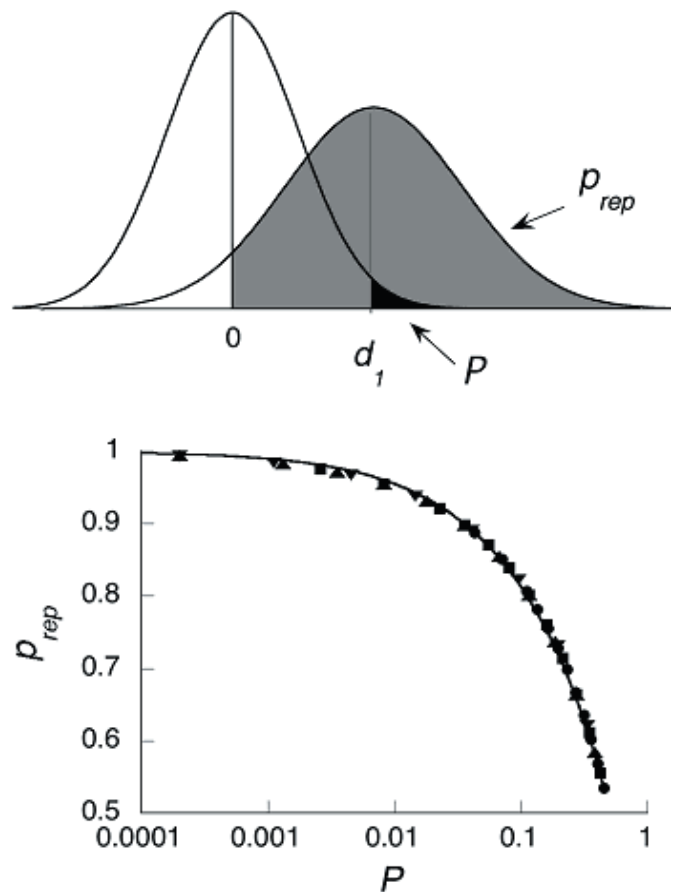


Figure 1. The left curve at top is the sampling distribution for a statistic such as a mean or effect size (d) under the null hypothesis. The traditional p -value is the area to the right of the obtained statistic, d_1 , shown in black. Shift this curve to its most likely position (the observed statistic) and double its variance (to account for the sampling error in the original plus that in the replicate) to create the distribution expected for replications. The probability of finding an effect of the same sign (p_{rep}) is given by the shaded area. The curve at bottom shows that as power or effect size change, p and p_{rep} change in complement. The figure is reproduced from Killeen (2005a).

de facto created two populations with different means. Or we may find that one dimension of our variable, here the brand of tea, is correlated with another, such as bag weight. Such additional information may warrant the assertion that there is a “real” difference between groups. If the statistic we derived from our samples is sufficiently deviant from zero—if it falls into the dark right tail of the sampling distribution in Figure 1—we conclude that the data are surprisingly (“significantly”) deviant from what is expected given the Null.

Given more, we could conclude more. We utilized data from the experiment to estimate the standard deviation of the sampling distribution; why not also use it to estimate the mean? In

for a penny, in for a pound: Slide the distribution in Figure 1 to the right, to center it over the measured effect size, d_1 . We can't know that that is precisely where it belongs; d_1 will deviate randomly around the true (population) effect size δ . Its deviation is *sampling error*. Any attempted replication will also deviate from δ by its sampling error. And the replication statistic d_2 will deviate from the first value d_1 by the sum of those two errors. In the long run (many original experiments, many replications), the distribution of replication attempts will be centered on δ with a variance twice that of the observed data. This is shown by the bell curve on the right of Figure 1, centered over our best current estimate of δ , d_1 . That curve is the "posterior (after the first measurement) predictive distribution". It is our best guess of where, and with what probability, the statistics from replications of our experiment will fall.

Just as our evaluation of the fairness of the coin depends on whose pocket it came from, our evaluation of a scientific claim will depend on everything we know about it. But everyone will know different things about any phenomenon, and as soon as that subjective prior knowledge enters the picture, probabilities themselves become subjective—a function of both the data and who is answering the question. This is, after all, why people bet on horses—and on anything else that moves—despite how many data are already public: Each believes that their own subjective priors are better than the opponents'. But we may give data a fair shake by assuming that we know nothing about the phenomenon a priori, to let the data speak for themselves. This means using *uninformative* priors that wash out of our answer as soon as we have collected a few data.

2. The second step is to decide on what we mean by replicate. How close do we have to come? Most often the claim that wants testing is that a manipulation had an effect, or that a relationship exists between two variables. Suppose an original experiment found an effect size of 0.5, which might have arisen from a difference of 1.0 between mean scores of samples whose standard deviation averaged 2.0. The investigator claimed that her manipulation was effective. A replication finding an effect size of 0.4 would provide support for that claim. Indeed, a replication finding an effect size of 0.2, supports the original claim *even if it does not achieve traditional statistical significance*. It provides weak evidence in favor of the claim. Only effect sizes the opposite direction are evidence against the claim. Meta-analyses may show us that each additional experiment gives us additional confidence in the true effect size being significantly greater than zero, even if the constituent experiments did not achieve significance.

Let us therefore take *replication* to mean measurement of an effect *in the same direction* as the original. The probability of this happening is given by the gray area under the replicate sampling distribution to the right of 0, most easily found in a table as the area from $-\infty$ to $z = kM/\sigma$, with $k = 1/\sqrt{2}$.

There is obviously a close relation between this area, which I call the probability of replication p_{rep} , and traditional p values based on the same equation with $k = -1$. As the effect size or the number of observations varies, p and p_{rep} vary in complementary fashion, as is shown at the bottom of Figure 1. In particular, whenever a p value has been calculated, one can immediately

infer p_{rep} by (a) calculating the z-score corresponding to $1 - p$, (b) dividing it by the square root of 2, and (c) finding the probability associated with this new z-score: $p_{rep} = N[N^{-1}(1 - p) / \sqrt{2}]$; that is, $p_{rep} = \text{normsdist}(\text{normsinv}(1-p)/\text{sqrt}(2))$, where *normsdist* is the cumulative distribution function and *normsinv* is its inverse. These may be found in the back of any statistics text, or issued as commands in a spreadsheet such as Excel®.

Circular Files To rule out reporting results because they don't achieve significance rules out the possibility of efficient and unbiased cumulation of the results by a later reviewer. This is known as the "file drawer problem"; although to some it is the "circular file problem". The new vehicle for inference, p_{rep} , doesn't force the misperception that failure to achieve significance is tantamount to failure to replicate. It doesn't force us to trash data that, aggregated with others, can have real value for the community.

A Significant Difference Why bother with all this if p and p_{rep} are kissing cousins? Because, *viva la difference*, kissing cousins are not identical twins. One can never make a positive claim with NHST ("Never use the unfortunate expression 'accept the null hypothesis'"; Wilkinson & Task Force on Statistical Inference, 1999, p. 599); and, without priors, one can never make the negative claim of rejecting the Null. But p_{rep} permits positive claims, such as: "My data will replicate approximately 70 [or 80, or 90] percent of the time." Values of p_{rep} greater than 0.9 correspond to significant p -values. But even if your p_{rep} is (only) 0.8, that still permits a positive and informative statement concerning the replicability of your data; you are left with something better to hold onto than the foul bag of Failure to Reject the Null.

Fear of the Unknown One of the tedious aspects of statistics is remembering the details. Unless you teach statistics, your ability to distinguish between Type I and Type II Errors and give a quick definition of the latter will be less than perfect. Feel guilt no longer. Because p_{rep} is not predicated on the truth or falsity of the Null, it does not incur either type of error. A large value of p_{rep} does suggest that the Null is false; but the utility of p_{rep} is not *predicated* on the Null being true, as is the case for NHST. No need to stay awake at night wondering whether to use Neyman and Pearson's critical regions or Fisher's p values (Christensen, 2005). Use p_{rep} .

Does p_{rep} really predict replicability? It provides an estimate whose accuracy depends on the similarity of procedure and subjects. It also depends, like any probabilistic event, on the luck of the draw (Cumming, 2005). If variables are measured or behavior motivated differently, then "realization variance" must be added to the sampling variance to predict the results. This is a realistic random effects model of prediction (Killeen, 2005a). But the burden of adding that realization variance belongs to the replicator, who chooses how deviant the conditions will be, not to the originator.

How likely is it that the original results were a fluke, and will not replicate despite a large p_{rep} ? Call a value of p_{rep} equal to ps "strong" evidence. The probability that a replication will provide strong support is $1 - \text{NORMSDIST}(\text{NORMSINV}(ps) - \text{NORMSINV}(p_{rep}))$. The probability that it will strongly contradict the original is $1 - \text{NORMSDIST}(\text{NORMSINV}(ps) + \text{NORMSINV}(p_{rep}))$. If we set $ps = .8$, and the original had a p_{rep} of .9, then the prob-

ability that a replication will provide strong support is 0.67; the probability of strong contradiction is 0.02.

Feel Real Confidence Replicability analysis, like traditional statistical analysis, is only half the story. Effect sizes are equally important, and should always be reported. An optimal inferential procedure would integrate effect sizes with the probability of replication, to achieve a true scientific decision theory. Presenting effect sizes in terms of a confidence interval is less than optimal, because confidence intervals are the alter-ego of NHST, and inherit the same difficulties of interpretation.

Whereas NHST takes a null effect as a default and hedges it with critical “significance” regions, CIs take the measured statistic as default and hedges it with limits. But a confidence interval is the difference between the population parameter and sample statistic, not territory on the x -axis. If the Null is true, the CI should be centered on 0; but if the statistic happens to equal the population parameter, then CI should be centered on that statistic. But if you knew which was the case, why do statistics? And if you don’t know which is the case, you shouldn’t put it anywhere (Estes, 1997).

“What to construct CIs around—and how to display them—remain issues for debate” (Fidler, Thomason, Cumming, Finch and Leeman, 2005, p. 495). They remain issues because their proper explanation is convoluted: “If the experiment were repeated 100 times and 100 confidence intervals like yours computed, approximately 95 of them would contain the population mean.” Just what this means for your particular data is so difficult to understand that standard reference manuals either get it wrong (e.g., Zwillinger, 1996, p. 608) or make a strategic decision to misrepresent it.

Life really can be much simpler. The familiar standard error bars are, *mirabile dictu*, replication intervals. Drawn flanking the measured statistic, they can be interpreted as the limits within which replications will fall approximately half the time (Cumming, 2005).

The First Chapter There’s a prequel to my story, one told by Fisher about a test conducted with a hypothetical lady who averred she could taste the difference when tea was poured into milk, versus milk into tea. He used the story to introduce permutation tests (as Salsburg, 2001, used it to name his charming history of statistics). Permutation tests are much better than traditional statistics for analyzing most psychologists’ research (Lunneborg, 2000), and can be used in concert with p_{rep} (Killeen, 2005b).

The Last Chapter It will require some experimentation to become comfortable with p_{rep} . The new statistic deserves its own treatment, but in the interim you can simply translate a p -value from any traditional test into a p_{rep} , and interpret it as above. Once you are comfortable with it, try using p_{rep} in your classes. You’ll find fewer students like mine, brought to tears by t . How long will it take journals to come around? I only have two data, both positive. Given the small database, I conjured some subjective priors by visiting an establishment of divination where bones were thrown, palms read, and tea leaves swirled. There I met, of all people, my old student! She bore no malice, but carried instead a Tarot, t -tables, and a certificate in tasseography. Reading my leaves, she predicted: “Eventually all editors will cease fum-

bling with the knot, dispatch the null *bête noire*, and evaluate manuscripts by their significance, effect size, and replicability. But on that happy day, *significance* will mean what it means to their mothers, not what it means to their statisticians.” Ahh . . . the pride we take in successful students!

Author Note

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The Psychology of Religion: Recent Progress and Future Directions

by Robert A. Emmons, University of California - Davis, and Raymond F. Paloutzian, Westmont College

Why do people engage in religion? Why do they take seriously realities that are unseen? What is this thing called religion?

Anthropologists tell us that there has never been a society without religion. Today, between three and four billion people of the world's population are adherents of the major religions. Evidence and experience suggests that a complete understanding of the psychological nature of human beings is impossible without a consideration of religion.

In many ways, it is our preoccupation with matters of the spirit that makes us uniquely human. What is the function of belief and faith in people's lives? How does religion matter in real outcomes in life? How do we explain its influence in life? Understanding when, under what conditions, and why religion does and does not shape human consciousness and action are among the major tasks of psychologists who study religion.

The Psychology of Religion Landscape

The psychology of religion is both one of the oldest and one of the newest topics in the field of psychology as a whole, and given global conflicts, it is, for the foreseeable future, one of the most important. It is so important after the destruction of the World Trade Center in New York on September 11, 2001, acts of violence with political and cultural goals but that were justified on grounds of religion, that, however seriously psychologists did or did not take the study of religiousness during the past century, to neglect a thoroughgoing psychological study of religion in the next century would be foolhardy in the extreme.

During the past 100 years, psychologists have sometimes taken a serious look at human religiousness—and sometimes they have not. Even today, after a quarter of a century of a dramatic increase in the scientific study of religion, an increase demonstrated by books published, articles in important journals, presentations at conventions, membership in professional associations, the mainstream discipline is only now beginning to take the topic seriously. We in Division 36 (Psychology of Religion) think this is late. There is still time, however, for the discipline as a whole to apply its vast array of methods and theory to the understanding of the propensity of human beings to be healthy or unhealthy, experience the normal and the abnormal, and do good and evil in the name of their religion.

After a period of relative dormancy, the psychology of religion and spirituality has recently re-emerged as a full-force, leading-edge research area that has contributed new knowledge, data, and professional activity to the rest of psychology (Emmons & Paloutzian, 2003). This is apparent upon examination of the recent trends in the publication of textbooks, journal articles, presentations at professional meetings, courses in the psychology of religion (Hester & Paloutzian, in press), the establishment of new journals, books on clinical and health issues, and the development of psychology of religion research that interfaces the theory and topics of the mainstream discipline (see, for example, *The Handbook of Spiritual Development in Childhood and Adolescence*; Roehlkepartain, King, Wagener, & Benson, 2006).

During the past 25 years psychology of religion material has appeared with increasing frequency in high-end journals. It has emerged as a strong research enterprise whose topics interface almost all areas of psychology, whose scholars produce an impressive body of research, whose research will further develop internationally and cross-culturally, and whose importance is only going to increase.

An increasing amount of research in the psychology of religion is being done with novel, creative methods, both quantitative and qualitative. A recent volume, *Handbook of the Psychology of Religion and Spirituality*, provides an authoritative, comprehensive overview of the field (Paloutzian & Park, 2005) and is recommended for the generalist. An examination of the *Handbook* reveals that all of the topics within the psychology of religion are extensions of and feedback to the overall body of theory and the database from general psychology.

The more applied areas of psychology such as clinical, counseling, and health have taken the lead in examining links between religion and psychological, physical, and interpersonal functioning. Additionally, or what are typically considered more "basic" subfields such as cognitive, developmental, and social psychology—are also recognizing that spiritual and religious influences may be profoundly important and can reveal new insights in psychological processes and mechanisms. Thus, progress in the psychology of religion has benefited from an increased appreciation of the importance of spiritual and religious phenomena amongst researchers and practitioners that has occurred largely outside the purview of Division 36.

Specific Areas of Progress in the Psychology of Religion

A brief article such as this cannot begin to convey the vast amount of work being conducted in the psychology of religion. Instead, we will present examples from four areas: The neurobiology of religious experience, human virtues, religion and health, and religiously motivated terrorism.

Neuroscience and Religious Experience There is now a recognized role for brain imaging in the study of human religious and spiritual phenomena. The capacity for spiritual and religious experience is inseparably connected to the architecture of the mind-brain (Newberg, D'Aquili, & Rause, 2001). With rapid advances in the development of techniques to measure brain activity, neuroscience approaches to the human spirit are receiving increasing attention. The hemodynamics of blood and oxygen flow or glucose metabolism in the brain as revealed by positron emission tomography (PET) or functional magnetic resonance imaging (fMRI) suggests that spiritual practices such as meditation and prayer involve increased activity in frontal brain structures, as well as those other brain areas that form a system to regulate and focus attention. There is also evidence that prayer involves increased activity in



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brain regions known to be involved in the production of language (Newberg, Pourdehnad, Alavi, & D'Aquili, 2003).

Much of the existing work connecting religious experience and the brain is based upon the study of either extreme religious states or highly developed prodigies. Thus, further work needs to be done in the study of more common, normal, everyday religious experiences, states, and behaviors. A number of interesting and empirically tractable questions can be envisioned. For example, what brain regions are activated or deactivated by the religious experiences of awe, gratitude, praise, and worship? Is there a unique pattern of activation for these or for particular forms of prayer? What are the appropriate tasks to activate the mental and emotional processes associated with these spiritual states of consciousness?

Religion and Virtue The study of virtue, at the nexus of the psychology of religion, personality psychology, moral philosophy, and the psychology of emotion, is making a comeback in psychology (Emmons & Paloutzian, 2003). Partly responsible for this resurgence is the positive psychology movement (Seligman & Csikszentmihalyi, 2000) which has sought systematically to classify human strengths and virtues into a comprehensive taxonomy (Peterson & Seligman, 2004). Concepts such as forgiveness, love, hope, humility, gratitude, self-control, and wisdom appear as highly prized human dispositions in Jewish, Christian, Muslim, Buddhist, and Hindu thought and are affirmed universal principles in world philosophies and ethical systems. Basic research as well as interventions to cultivate these virtues is well underway. This growing literature has captured the attention of organizational psychologists, and the field of *positive organizational scholarship* has emerged (Cameron, Dutton, & Quinn, 2003) as has an increased appreciation of the role of spirituality in the workplace (Giacalone & Jurkiewicz, 2003).

Among the virtues, forgiveness has been an especially vigorous research area, and is a process that links readily to concerns in clinical, counseling, and health psychology (see Worthington, 2005 for a review). Inspired by (but not limited to) religious systems, research is answering fundamental questions about what forgiveness is and isn't, how it develops, what are its physiological correlates and physical effects, whether it is always beneficial, and how people—if they are so motivated—might be helped to forgive. The field of forgiveness studies is good example of how the psychology of religion embodies a dual mission of basic research and clinical practice.

Religion, Spirituality, and Health The growth in empirical research on religious and spiritual topics has quite likely been influenced by many factors, not the least of which is the growing body of research demonstrating that religious and spiritual variables affect human health and well-being. It is well-known that patients in health-care settings welcome attention to spiritual aspects of their illness by their health providers.

Furthermore, an impressive research literature, though not uncontroversial, has documented that religious practices are associated with morbidity and mortality across the life-span (Miller & Thoresen, 2003). For example, religious practices including participation in religious activities such as prayer and attending services has been linked to better coping with stress, prevention of and recovery from illness, and even longevity (Powell, Shahabi, & Thoresen, 2003).

Critics have argued, however, that established relationships between religiousness and health are not robust and that more rigorous epidemiological studies are needed before the health

benefits of spiritual practices can inform public policy (Sloan & Bagiella, 2002). It is likely that future waves of research will incorporate increasingly sophisticated research designs and statistical analyses in order to disentangle linkages between religious activities and health outcomes.

Religious Violence and Terrorism

Few would deny that religion is often implicated in international conflict, terrorism, and violence. Given the importance and urgency of this topic, progress regrettably has been considerably slower than one would like. However, psychologists of religion, joined by other social scientists and religious scholars (e.g. Wellman & Tokuno, 2004) are exploring processes through which religion appears to facilitate, and even encourage violence and terrorism. Books with titles like *Terror in the Name of God, Is Religion Killing Us?*, and *When Religion Becomes Evil* are appearing with increasing frequency. Some scholars have argued that violence in the name of religion occurs when an authentic religion has been corrupted or perverted (Kimball, 2002) while others contend that religious violence, though not inevitable, should not be surprising, given that religious conflict is inherent in religious systems (Wellman & Tokuno, 2004). Still another interesting focus has been on identifying the psychological characteristics of suicide terrorists (Atran, 2003; Victoroff, 2005) of which religiosity is a strong factor, reflected in an intense loyalty to the religious organization and a belief that the actions of the terrorist are divinely sanctioned.

Silberman (2005) identifies several ways in which psychologists could use their expertise in topics such as decision making, conflict resolution, prejudice and discrimination, and coping with stress to contribute to the prevention of religious violence and terrorism.

The Future

Spiritual and religious phenomenon are very complex, very compelling, and at their core, very subjective experiences. We have therefore contended (Emmons & Paloutzian, 2003) that a *multilevel interdisciplinary paradigm* (MIP) is required to anchor the study of spirituality and human flourishing strongly in the biological sciences and in the social and clinical sciences. Allied fields contributing to the MIP include evolutionary biology, neuroscience, anthropology, cognitive science, theology, and philosophy as a generalized cross-disciplinary approach to critiquing and sharpening the assumptions of science.

This paradigm recognizes the value of data at multiple levels of analysis, while making non-reductive assumptions concerning the value of spiritual and religious phenomena. Non-reductive implies that spiritual or religious phenomena cannot be accounted for solely in terms of existing psychological, social, or biological constructs and processes. Appropriated wisely, the MIP will yield new and scientific ways to talk about the human spirit (Emmons & Paloutzian, 2003) and will enable findings within the psychology of religion to impact upon other subdisciplines within the field of psychology, and vice-versa. Yet we predict that resistance to matters of the spirit will persist. After all, religion is a topic that activates passionate feelings, and there are still significant numbers in the professional ranks who perceive the topic as irrelevant or unscientific. Within the field, there are those who would prefer that psychology attempt to *under-*



Raymond Paloutzian

stand religion rather than *explain* it. Those who do leading edge research on this topic still have an uphill road ahead to convince their colleagues in the rest of the discipline that they would be wise to incorporate religious processes into their own research and theorizing.

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Matthew Goodwin

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—Matthew Goodwin, Listmaster

Aliens—from Inner Space!

by Ann Weber, University of North Carolina at Asheville



Ann Weber

It's rush hour at Grand Central Station. A man appears in a beam of light in the bustling crowd. Because he speaks calmly and quietly of visiting from another planet, he is cuffed and whisked off to Bellevue. As the 2001 film "K-PAX" begins, we recognize ours is an unfriendly planet to those who could be labeled as different. Eventually the self-described alien (Kevin Spacey, pun unintended), who calls himself Prot, is transferred to a nicer psychiatric hospital, where his case is taken over by psychologist Dr. Mark Powell (Jeff Bridges, in a reverse reference to his role as an alien visitor in 1984's "Starman"). Prot (rhymes with "wrote") also becomes the darling of the ward. He charms the staff and helps fellow patients who had resisted contact with Earth reality by promising to take one of them along when he returns to his home planet K-PAX. Powell finds Prot and his story compelling, struck by odd details of Prot's behavior: Prot knows astronomy that even astrophysicists haven't been able to confirm. He voraciously consumes fresh fruit at every opportunity, munching bananas with peel and all: "Your produce alone has been worth the trip," he compliments his host. Prot is sensitive to the ironies of Earth language: "Have a seat," doctor/patient, hospitable/hospital. He is also sensitive to light, protecting his vision with killer celebrity sunglasses. And he is terrified of garden sprinklers.

Prot's calm centeredness appeals to Powell, whose own life and family are disrupted by his emotional distance and distractedness. Powell and Prot develop more of a peer relationship, a friendship, put off only slightly by Prot's assertions that he is from K-PAX, a lovely and peaceful place with no stress—and significantly, no marriage or family life, either. A man of science, Powell makes Prot's true origins into an obsession, a mystery he must solve, before the date Prot has set for his departure back to K-PAX.

Spoiler! Do not read the rest of this paragraph if you want to enjoy the movie's ending: Using hypnotic age-regression and other clues, Powell races against time to learn that Prot is really Robert Porter, a man whose childhood troubles were comforted by an imaginary friend—or dissociated self—from the made-up planet. When Porter's wife and daughter are murdered, Porter exacts revenge and then attempts suicide. Carried away by a river, Porter re-emerges far away in the persona of the untroubled space traveler Prot. On the appointed day of his return to K-PAX, Prot appears to have left the hospital, then is found on the floor, collapsed in a catatonic state. In the end, the movie allows our hero to fix the lives of his therapist and his fellow patients and rewards him with no single diagnosis. A classic movie patient, he suffers from delusions, post-traumatic stress disorder, and catatonic schizophrenia—existing, in some way, in his own world.

Monstrous Invaders

As a child growing up in the 1960s, I was fascinated by monsters: caped or hirsute fiends in classic horror movies; mutants

warped by atomic radiation; and especially, space aliens. Extraterrestrials, I learned, came in all forms and sizes, usually outsized and repulsive, featuring tentacles, claws, and/or slime: giant crabs, leeches, and ants; or an enormous crawling eyeball! No matter the challenges of cross-species romance, they always wanted the (human) girl, who obligingly fainted on contact till her rescue by the all-American boy. But the greatest possibilities lay with humanoids. These might be bipedal creatures in metallic jumpsuits, with bulging exposed brains and opposable claws. They might speak perfect English (or Japanese)—or creepily, like James Arness's thawed-out "Thing from Another World" (1951), only roar and never speak to us at all.

Why are aliens inherently scary? Why would the little green men want to bounce death rays at us or take our brains? We might find some intriguing parallels between our ideas about fictional aliens and our ideas about the mentally ill—and, for that matter, our ideas about mental health professionals as well. So put on your tinfoil hats! Let's take a scientific, B-movie-loving look at the beings who've visited us from other galaxies—and at a some of the implications of movie perspectives on space, invasion, and alienation.

Invaders with Friendly Faces

Monstrously ugly aliens were scary, all right. But more insidious were the humanoids, those who looked like us, or took control of humans in order to take over our (then desirable) planet. I first saw the wonderfully tacky but haunting "Invaders from Mars" (1953) on TV in the early 1960s. A Martian saucer's landing in and under the ground of suburbia is witnessed only by a small boy. Naturally the adults don't believe his account, but they humor him and go off to check out the scene of the slime. When they finally return, they have stiff gaits, no affect, and small scars on the back of their necks—which, again, are noticed only by our boy hero. Implanted electrodes turn the victims into puppets, luring in other humans for similar surgery. Eventually the boy wins the support of a lady doctor and an Army colonel, who deploys troops and bombs in an effort to blast the aliens back to the angry red planet, or Hell, whichever comes first. The movie's ending left me wondering how we could ever be safe from an enemy whose reality we denied. But what haunted my dreams even more was the idea that the "aliens" among us might really be familiar, friendly fellow humans who had been altered and alienated from their true selves.

This fear of familiar monsters is the central paranoia in "Invasion of the Body Snatchers" (1956), a classic film showing a small town's takeover by space invaders who methodically replace the townspeople with replicas made out of gigantic, husk-like

Pods. The aliens take over when their victims finally fall asleep near the ubiquitous pods, which then take on their features and much of their personality. The pod people deny their alien conversions unconvincingly, protesting in flat, toneless voices that “they-are-fine-why-do-you-ask?” With “Body Snatchers” as with “Invaders from Mars,” the truth is revealed by the aliens’ inability to feel or express emotion. One pod assures our protagonist Miles Bennell (Kevin McCarthy) that he won’t miss human passion, as “we have no need of emotions” such as love or anger. But Miles is relentless in his flight and his pursuit—“They’re here, they’re here!” he warns the heedless drivers honking their way through a traffic jam. (Hmm, maybe the pod guy was right about emotions?) Before the movie’s resolution, Miles is picked up and locked up—where else?—in a psychiatric hospital, where serious men in white coats ignore his pleas and his good mental health history.

Alluring Aliens

Some movie aliens looked even better than human, such as tall, handsome Klaatu (Michael Rennie) in “The Day the Earth Stood Still” (1951). Like Mr. Spock and his Vulcan predecessors on television’s “Star Trek,” Klaatu came as an ambassador of peace, only to be disappointed by humans’ obsessive Cold War rage and paranoia. Landing his saucer on a sunny summer day, far too close to the White House, and demanding to speak to the U.N., Klaatu is taken (can you guess?) to the psychiatric lock-up ward in a military hospital. He neatly escapes because he is, after all, superior (which we know from his British accent), and seeks to prove his credibility by solving mathematical equations, defying the laws of physics, and turning on the special healing and destruction powers of his giant robot, Gort, with the magic phrase, “Klaatu barada nikto.” (I tried this with my doctoral oral committee, however, with only mixed results.)

Glamorous and wise, far superior to Earthlings, these refined and educated life forms seemed to promise “better living by leaving Earth.” Even then, like any later fan of TV’s “X Files,” I wanted to *believe*. I read science fiction and sketched Andromedan moonscapes with green skies and harmonious neighborhoods. Long before I wanted to be a psychologist, I wanted to spot a UFO. In graduate school, my classmates and I left a showing of “Close Encounters of the Third Kind” (1977), dazzled by then-very special effects and charmed by the large-eyed, pint-sized aliens who eagerly invited select humans like Richard Dreyfuss to travel away with them. (It dismayed my classmates when I admitted that, like the protagonist, I would go, too. They argued heatedly with me, insisting I should stay, though I certainly hadn’t even been *invited* to any other galaxy just yet.)

In “Simon” (1980), the eponymous hero (Alan Arkin) is unwittingly chosen by a mysterious thinktank to test the gullibility of Americans. They brainwash him into believing he himself is an alien on Earth, sent to deliver “critical” messages that turn out to be merely warnings against New Age affectations. What kind of Earthling would be so desperate for approbation as to fall for

their scheme? Simon, of course, is an assistant professor—of psychology.

The Others Among Us

Even when they have British accents and nice uniforms, we are at least a little frightened by visitors from outer space. What is it that makes aliens *alien*? To be alien is to be “other,” just as one can become alienated from society, or even from oneself, insane—in which case you’d need the services of an *alienist*, the early term for a psychiatrist. In a range of science fiction and horror movies, we see the psychology of aliens: how aliens are defined and treated. Aliens are feared for their possible mind control powers, or repulsed for lacking affect or humor. Their inhumanity might be contagious, like Communism or a bad cold. Or they might force it upon us, with pods or probes. Lacking happiness or humor, they seem oddly determined to share their lot with us. Those infected by aliens are possessed and must be purged or destroyed if the world is to be saved. Those not yet afflicted by aliens must hide their resistance, wear tinfoil hats, or march in lock step to pass as one of Them.

Mental illness is also lampooned as a form of alienism. To suffer from disorders of thought or affect is to be loony (lunatic, *à la luna*, the moon), spacy, a space cadet, from another planet. Ironically, when science fiction and horror movies flourished, psychology and psychiatry were somewhat feared. They could treat and heal, but also control: Drugs, psychosurgery, and behavioral programming were the weapons of brainwashing. If alienists could turn humans into aliens, who better to control the aliens who landed among us? No wonder Klaatu and Prot and Miles were all committed for observation . . .

Movies about extraterrestrials, whether they are cute and bug-eyed like “E.T.” (1982) or horrifically reptilian as in “Alien” (1979) and its sequels, tell us how we view those who are “other.” They play out our fantasies about what can go wrong if science and technology take over our lives. They remind us that to be human is to experience passion and emotion. They suggest we maintain a little paranoia about what and whom to trust. They nourish our imaginations with images of danger, crisis, and peace. And they remind us, as in the closing lines of “The Thing from Another World”:

“Keep looking. Keep watching the skies!”



What They're Reading . . .

Edited by Ann Ewing, Mesa Community College



Ann Ewing

If summer afforded you the opportunity to catch up on your reading, you may now be ready for some new suggestions for fall reading. Three prominent psychologists, Barney Beins, Skip Pollock, and William Buskist, have generously shared the following recommendations of their favorite selections. These annotations vary greatly in topic but all sound intriguing and promise to entice readers of all types. We invite you to browse through the following descriptions of books that are reportedly found by the bedsides of these distinguished professors and discover the interesting material that awaits you.

BARNEY BEINS

Dr. Beins is a Professor of Psychology and Chair of the Department at Ithaca College. He is a Fellow of Division 2 and was the 2004 President of the Society for the Teaching of Psychology. Prior to that, Barney served as Director of Precollege and Undergraduate Education at APA from 2000 to 2002. Dr. Beins reports that "In my reading, I find that I can gain insight into psychological principles by looking at the insights, creativity, successes, and frustrations of people who are engaged both in mundane and in extraordinary activities." The following selections illustrate the material he has recommended as sources for that insight.

Calendar: Humanity's Epic Struggle to Determine a True and Accurate Year, by David Ewing Duncan. Imagine a story involving political intrigue, economic manipulation, warfare, religious zeal, and intolerance. In Duncan's fascinating nonfiction book on the quest to measure the length of the year, you will encounter all of these. We take for granted that the year is 12 months long, that the week is seven days long, and that the day is 24 hours. In reality, all of these conventions are accidents of history. As Duncan relates, the path from reliance on the seasons as the measure of the year to current atomic measurements involves a marvelous array of intense human motivation, brilliant thought, and nefarious people. This straightforward topic provides evidence of twists and turns in the most surprising places.

Moneyball: The art of Winning an Unfair Game, by Michael Lewis. Baseball fans do not have to be told that the New York Yankees are the game's most successful franchise. What they won't know, until they read *Moneyball*, is that the Oakland Athletics manage to succeed mightily with much less money, but much greater intelligence, than the Yankees. Initially, it is hard to believe that a book about the economics of baseball could captivate the typical baseball fan. But this volume is a masterpiece. It relates how the Oakland General Manager, Billy Beane, actually makes use of the statistics that baseball revels in to identify supposedly marginal and often overlooked players. And each year, his team makes it to the playoffs. As I write this, Oakland is still in the thick of the playoff race. After you read *Moneyball*, you won't be surprised.



Barney Beins

The Pencil: A History of Design and Circumstance and **The Evolution of Useful Things: How Everyday Artifacts—from Forks and Pins to Paper Clips and Zippers—Came to Be as They Are**, both by Henry Petroski, and **Zipper: An Exploration in Novelty**, by Robert Friedel. This set of three books about mundane artifacts of our lives show their surprisingly complex histories. For example, who would have thought that it took over 40 years to invent the zipper and to get it into the public eye? Interestingly, the manufacturers of zippers in the 1920s explicitly advertised the reinforcing properties of zippers when children were able to dress themselves. Similarly, the pencil as we know it evolved over centuries. It wasn't a simple process, by any means. (If you read the book on the pencil, you will find out how they get the lead inside the wood.) Finally, in *The evolution of useful things*, you see more evidence of human ingenuity, persistence, and motivation. After reading this book, you won't look at paper clips, ring tabs on soda pop cans, or dinner table place settings in quite the same way. This triad of books deal with single, and apparently simple, themes stretches simple topics to include the human element that psychologists find fascinating.

Stiff: The Curious Lives of Human Cadavers, by Mary Roach. This marvelous book describes a kind of life after death, although it is about as far from Dracula and the undead as you could get. People who donate their bodies to science, a vague statement if ever there was one, contribute in significant ways to those of us who still inhabit this mortal coil. Donating your body to science could mean dissection in an anatomy lab, but it could also mean being used for crash test research or to study the effects of land mines on feet and legs. Some of her descriptions involve uses of cadavers that might make one uncomfortable. However, Roach's instructive and compelling descriptions of the uses of cadavers are both very funny and highly respectful of those who provide their bodies for the betterment of people who survive them.

Ten Big Ones, by Janet Evanovich. This wonderfully funny novel continues the exploits of Stephanie Plum, an inept bounty hunter who, in spite of herself, ultimately prevails in her quests. I recommend starting with the first novel in this series (*One for the money*) and working your way through to this tenth story. If you are a Stephanie Plum fan who hasn't read this one yet, you will delight in the return of Sally Sweet. The writing is delightful, quick, and irreverent. It's a perfect antidote to the reading of endless student papers.

SKIP POLLOCK

The second contributor, Dr. Pollock, is a professor of psychology at Mesa Community College, Arizona, and currently serves on the executive Board of Psychology Teachers at Community Colleges (PT@CC). Dr. Pollock is a clinician who has had private practices and college teaching appointments in several different states and types of colleges. Recently she has been interested in health psychology and has achieved instructor certification in Tai Chi. Settled nicely in Phoenix, her nightstand recently contained the following books:

Blink, by Malcolm Gladwell. The subtitle of this small but wonderful book is "The Power of Thinking Without Thinking."



Skip Pollock

Gladwell looks at people who “just know”. He looks at how people make decisions, at various levels of awareness and how people are influenced. Bottom line, this is an easy-to-read popularization of some very relevant, psychology research. I love it when authors make “our stuff” accessible (as well as very interesting) to the general public. Seeing a “psychology book” on the best-seller list—that is not sappy-self-help—just plain feels good.

In the Wake of the Plague, by

Norman F. Cantor. One of my great interests is history, particularly of the middle ages. Why? Barbara Tuchman answers that question best in her forward to her book, *A Distant Mirror: The Calamitous 14th Century*. She says, “If our last decade or two of collapsing assumptions has been a period of unusual discomfort, it is reassuring to know that the human species has lived through worse before.” Cantor is a serious, academic historian who also writes well. This is a fascinating book because Cantor focuses on a human perspective. And it also counts as a form of “reassurance therapy” for existential anxiety.

Bangkok 8, by John Burdett. This was a fun mystery read that makes you think—just a wee bit. The protagonist, Sonchai Jitpleecheep, is a police officer in Bangkok. He is a devout Buddhist who was raised by a single-mother who was a famous and successful prostitute. Sonchai must work with Americans, the American military system, and the “informal” (as opposed to corrupt) Thai police system to find the murderer of a Marine sergeant. Burdett gives some interesting “outsider” perspectives in the voices of his Thai characters. As one of them notes: “The West is a Culture of Emergency. . . . Of course, if you didn’t believe you could control everything, there wouldn’t be an emergency, would there?” Hmmm.

The Scalpel and the Silver Bear, by Lori Arviso Alvord, MD. The subtitle of this book tells the whole story: “The First Navajo Woman Surgeon Combines Western Medicine and Traditional Healing.” I’m a “new” T’ai Chi instructor—and this has plunged me into the study of the world of alternative medicine. This book personalizes the new integration of the worlds of medicine—and belief systems about healing.

WILLIAM BUSKIST

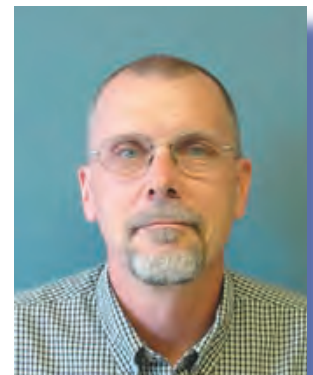
The final series of annotations was contributed by William Buskist, a Distinguished Professor in the Teaching of Psychology and Alumni Professor at Auburn University and a Faculty Fellow at Auburn’s Biggio Center for the Enhancement of Teaching and Learning. He has published many articles and books, and serves as a section editor of *Teaching of Psychology* and co-editor of Blackwell’s new book series called *Teaching Psychological Science*. Dr. Buskist is the recipient of numerous teaching awards including the STP Robert S. Daniel Teaching Excellence Award and the Auburn University Gerald and Emily Leischuck Presidential Award for Excellence in Teaching. He is also a Fellow of APA Divisions 1 (General Psychology) and 2 (STP) and will serve as President-Elect of the Society for Teaching of Psychology in

2006. Dr. Buskist contributed the following selections from his nightstand collection.

The Five People You Meet in Heaven, by Mitch Albom. After reading Albom’s best-selling *Tuesday with Morrie*, I picked this book up off the bargain table at our local bookstore. I was not disappointed. It is a fast-moving and compelling story about the life, death, and after-life of Eddie, a mechanic at Ruby Pier amusement park. While he was alive, he felt that his life was mundane and unfulfilled. His untimely and unfortunate death sets in motion a series of heavenly encounters with five people with whom he had a significant, but unrecognized mortal connection. They each teach him an important lesson about the meaning of life—and death.

Eats, Shoots & Leaves: The Zero Tolerance Approach to Punctuation, by Lynne Truss. After Barney Beins recommended this book to me, I dropped by my local bookstore once more to check it out. I found it resting comfortably on the bargain table a full 40% off its MRSP. Lynne Truss is a self-proclaimed stickler for proper punctuation—her body experiences full tilt at any and all public misuses of the comma, exclamation point, colon (and its half-sibling, the semi-colon), question mark, and of course, the period. If you’ve ever been bugged by signs that read something like “Dog’s for sale” you may like this book almost as much as Barney and I do. It is a quick-witted and delightful read.

Talks to Teachers on Psychology and To Students on Some of Life’s Ideals, by William James. This is one of the few books I did not find on the bargain table at my local bookstore. In fact, I couldn’t find it anywhere at my local bookstore, so I was forced to purchase it on the Internet at full price plus shipping! Although I had read bits and pieces of the Auburn University Library’s copy of *Talks* over the years, I thought it was high time to sit down and read it from cover-to-cover. I am glad I finally did. The book, of course, is a collection of James’ public lectures and addresses to students. I won’t spoil the punch line of these talks, but suffice it to say, that much of what James had to say at or near the turn of the 20th century is still relevant to teaching today.



William Buskist

...

And there you have it—a baker’s dozen plus one possibilities for this Fall and Winter, just in case your bed stand is bare. And, by the way, do you have some current favorites you would like to share with the Division 1 membership? If so, please contact me at ewing@mail.mc.maricopa.edu.



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A Rose by Any Other Name

by George W. Albee



George Albee

I have decided that one of the reasons I spend so much time with the newspapers is that I have a fascination with names. I'm not sure when this preoccupation began, but I suspect it was during my childhood in a small Pennsylvania town settled early in 19th century by freedom-seeking German Catholics. A very large proportion of the town's population had family names like Schwobenbauer, Grotzinger, and Kronenwatter. No one thought this unusual—it was just the way things were in St. Mary, Pa. (I was a member of a small persecuted minority: Protestants—with names like Smith and Potter.) Many of these "English" names originated with a trade—Miller, Baker, Clark, Dyer, Weaver, Fryer—maybe even Walker and Stone.

In those long-ago days, of course, women took the family name of their husbands. This makes the task of tracing one's ancestors very difficult, and really a waste of time. One of my father's brothers traced the Albee line back to the first arrival from England in Braintree, Mass., in 1650—eight generations from him to me. But only half of my genes come from my father. And only one quarter from my grandfather. If I started with one million genes and halved the number for eight generations, I wind up with an ancestor with whom I share only .008 or 8/1000th of his genes. (So what is the big deal about the Sons of the American Revolution?)

It does make some sense for families to have husband and wife share a hyphenated last name, at least to remind the children that they are related to two sets of ancestors. But there are problems with hyphenated names. I now have grandchildren who use Albee-Strauss, Albee-Donovan, Mearanov-Albee, and Willson-Albee names in school. Among their high school dating group were teenagers named Schmucker-Schepp and Bartholomew-Agincourt. If love and marriage should occur (it could happen!), would their children choose to live as Albee-Strauss-Schmucker-Schepp? And if one of them met and later got involved with a Kronenwetter-Schwobenbauer? When would it end?

I enjoy reading the marriage announcements in the papers. Often two apparently quite different gene pools get combined and, according to geneticists, this often leads to "hybrid vigor," especially viable and talented offspring. Did you know that Nadia Cominece (three gold medals and 14 in the 1976 Olympics) is married to Bart Conner, another gold-medal winner? And the anticipated offspring of Lebanese-American Andre Agassi and German Steffie Graf seems like a good bet for future tennis fame. It is not only the rich and famous. Recently I noted that a woman named Mangicavallo married a man named Steinberg. Great mix.

Geneticists assure us that whenever two different cultural, religious or ethnic groups live side by side there is an inevitable mixing of the gene pools. Some have even tried to calculate the date, two or three thousand years hence, when the world will be one race. It doesn't really matter whether this makes one happy, angry, or resigned. It will happen. No more ethnic jokes.

For the present, however, there is still some wonder in names. A Canadian psychologist, Hank Davis, has published several articles on the coincidence of people's names and their work. He largely confined his search to academics and especially to psychologists. Should we be surprised to learn that

some of the latter are named Head, or Brain, or Smart; that Child studies children; Husbands studies dating; Hooker is an expert on pornography; Chu writes about nutrition; and Reeder researches reading, as do scholars named Reed and Reid? Two foundation heads in Texas are Ima Hogg and Ura Hogg. Then there is the nature columnist Iona Bird.

I was not convinced until the University of Vermont hired a new chair of animal sciences named Bull—who has been doing research for years on dairy farming. Once one gets sensitized to this phenomenon it turns up everywhere.

Who studies the role of cholesterol in arteriosclerosis? Dr. Butterworth, of course. A local builder is named Wood, and a gastroenterologist is Dr. Belch. A friend recalls a surgeon in his hometown named William (Will) Slaughter and another Philip (Fill) Graves. Can this be? And don't forget the bank president named Miser and a plumber named Leaky.

Rereading my favorite book this week (S. Hawking's "A Brief History of Time"), I discover that he refers to a famous paper on the hot, early stage of the universe by Alpher, Bethe, and Gamow (close enough to the beginning of the Greek alphabet—Alpha, Beta, and Gamma—to be appropriate for an account of the beginning of the universe).

And I cannot forget a paper on memory that appeared in "Science" authored by Wise, Yokel and de Wit. Or a student of obesity named Gross.

OK—you are now free to find your own curious coincidences and combinations.

P.S. I just read that Gen. Jumper, a former paratrooper, is the new head of the Air Force.

George W. Albee is now retired from the University of Vermont, living on Longboat Key, Florida. Dr. Albee was President of APA in 1970 and is now the President of Division 1. This column originally appeared in The Longboat Observer and is reprinted here with permission.

KNEE-SLAPPER AWARDS

Do you know a good joke about psychology or psychologists? The APA Society for General Psychology is pleased to announce a contest seeking the best of such humor. Three awards and \$100 checks will be presented during the APA in August 2006, at its symposium on humor: (1) Best joke, (2) Best joke submitted by a student, and (3) Best original cartoon. Further details are available on the Society's website, <http://www.apa.org/divisions/div1/>. Entries are due by March 1, 2006 to Humor Chairperson Joseph Palladino, jjpallad@usi.edu.

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