Challenging Mind Myths in Introductory Psychology Courses

Scott O. Lilienfeld, PhD, Emory University

For introductory psychology students, coming to understand the science of psychology necessitates at least as much unlearning as learning. That is, our students must be willing not merely to acquire new information, but to abandon a good deal of information—and often misinformation—that they bring with them to the first day of class. Although this assertion may be surprising to some readers, it is supported by two major lines of evidence.

First, as Harvard psychologist Daniel Gilbert (1991) observed, psychological research demonstrates that our mental apparatus is predisposed to believe. We first accept uncritically what we hear, and question it only later. As a consequence, believing what we're told comes to us effortlessly. In contrast, scientific thinking does not. As science writers Lewis Wolpert (1992) and Alan Cromer (1994) noted, scientific reasoning is unnatural, because it often requires us to think in ways that run counter to our common sense. For many centuries of human history, for example, the notion that the sun revolves around the earth seemed blatantly self-evident. A further, we see the sun moving across the sky each day, while the earth seemed blatantly self-evident. After all, we require us to put aside our perceptions and trust research evidence. As Stanford psychologist Lee Ross (see Ross & Ward, 1995) pointed out, we are all prone to naive realism: the idea that we see the world exactly as it is. Naive realism is a powerful obstacle standing in the way of teaching our students to question their initial impressions and intuitions.

Second, surveys (e.g., Kowalski & Taylor, 2004) demonstrate that many, even most, beginning psychology students cling to numerous misconceptions concerning human behavior. A selective sampling of these widely held “mind myths” (Della Sala, 1999) includes:

- Most people use only about 10% of their brain power.
- There is strong scientific evidence for the existence of extrasensory perception (ESP).
- It’s almost always better to express anger directly than to hold it in.
- In interpersonal relationships, opposites attract.
- High self-esteem is necessary for good psychological adjustment.
- The polygraph test is a virtually infallible detector of lies.
- Our memory operates very much like a video tape or tape recorder.
- Psychiatric hospital admissions, suicides, and crimes are especially prevalent during full moons.
- Most children who were abused in childhood grow up to become abusers themselves.
- Raising children similarly tends to lead to similarities in their adult personalities.
- “Schizophrenics” have multiple personalities.

To address these erroneous beliefs in introductory psychology courses, teachers need to understand the psychological and sociological sources of these beliefs and to explain these sources to their students. I’ll discuss four reasons for mind myths here.

First, the media and Internet often foster misconceptions by presenting psychological information in an oversimplified and misleading fashion. For example, a few days before I wrote this essay, the news media widely reported that John M.ason, fiancé of the now infamous “runaway bride” Jennifer W. Libanks of Duluth, G., A., was asked to take a polygraph test to prove his innocence (Mason passed the test). Yet virtually no reporters bothered to point out that the polygraph test is a highly fallible indicator of falsehoods. The onslaught of media

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APA Board of Educational Affairs (BEA) To Award Block Grants in Support of Precollege and Undergraduate Teaching Conferences

To enhance the quality of teaching and learning outcomes, the Board of Educational Affairs reviews proposals for financial support to award $5,000 in BEA Block Grants each year.

Criteria
To be considered for funding, applications must meet the following criteria:

1. The conference proposal must advance the teaching of psychology at the secondary, 2-year, and/or 4-year levels;
2. The conference must be directed by an APA member, associate, or affiliate;
3. The grant must be requested by an APA member, associate, or affiliate; and
4. The grant must be used to offset travel expenses of selected conference participants, registration fees of conference participants, and/or speaker fees.

It is possible that conferences that have received block grants 2 years in a row may not be funded or may be funded at lower levels on the third consecutive application to ensure that a variety of conferences receive grants.

Proposals for block grants will be reviewed and evaluated according to the following criteria:

1. Conference Goals and Activities. Proposals will be rated on the perceived importance and innovativeness of the conference as well as the clarity and completeness of the description of the conference objectives and activities. (A conference announcement/brochure should be submitted with the application.)
2. Composition of Target Audience. Proposals will be rated on the potential impact and suitability of content for the target audience.
3. Budgetary Information. Proposals will be rated on the clarity and completeness of the description of the conference budget, anticipated expenses, and confirmed and anticipated sources and amounts of funding.

Following the evaluation of the proposals, the BEA Block Grants Subcommittee will recommend monetary awards based on the availability of funds and on the quality of the applications.*

* Applicants may be awarded up to $1,000 during a given year. If fewer than five acceptable applications are received in a given year, the BEA may award more than one block grant (and more than $1,000) to the same conference in that year.

Deadline
Funding requests for teaching conferences in 2005 should be postmarked by September 29, 2005. Please send written requests to:

Martha Boenau
Education Directorate
American Psychological Association
750 First Street, N.E.
Washington, D.C. 20002-4242

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APA Nation-wide High School Psychology Program—Increased Funding for 2005

The American Psychological Foundation (APF) Nation-wide High School Psychology Program annually allocates funding to support programs that advance high school psychology. The APF Board of Trustees has increased the level of funding in 2005 to $4,000. If you are planning a program at your local or state level, consider applying for an APF fund! To request funding, send a letter of request to Emily Leary in the APA Education Directorate, 750 First Street, N.E., Washington, D.C. 20002-4242 (eleary@apa.org).

Information on the program can be found at http://www.apa.org/apf/nation-wide.html.
Happy New Year!

Happy New Year! Most people don’t get to say that more than once each year, but as academic psychologists we have the privilege of celebrating two new beginnings annually—the traditional January 1st and the start of the academic year. On behalf of the APA Committee of Psychology Teachers at Community Colleges (PT@CC), I want to welcome you back to your respective campuses for the start of Academic Year 2005-2006. New Academic Year’s Eve is a time to reflect on the events of the previous year and to look forward to the continuation of old traditions and the new adventures of the coming year.

PT@CC has grown almost exponentially since the inception of the APA Community College Teacher Affiliate program in January 2003. We now have more than 600 affiliates and about 200 APA Members/Associates in our ranks.

The past year has been a particularly exciting one for PT@CC:

- We held our first national PT@CC committee election, and out of an impressive slate of 11 candidates, elected LaDonna Lewis, PhD, of Glendale Community College in Glendale, AZ, and Susan K. (Skip) Pollock, PhD, of Mesa Community College in Mesa, AZ. As I am writing this column, this year’s election is under way.
- We sponsored 5 hours of convention programming and a reception for community college teachers at the 2005 APA Convention in Washington, DC. A great time was had by all. To reach out to teachers who could not attend the national convention, PT@CC members hosted programs for community college faculty at a number of regional and national conferences, including EPA, MPA, WPA, and RMPA.
- Our teaching tips contest for teachers and our electronic project contest for students again drew large pools of entries. Selecting from among the outstanding submissions once again challenged our judges. Winning projects can be viewed on the PT@CC Web site at http://www.apa.org/ed/pceu/pdfhome.html.
- Finally, through our popular “Excellence in Psychology Award” program, teachers across the nation were able to recognize their outstanding students.

Academic Year 2005-2006 is shaping up to be equally challenging and exciting. A top priority will be a project that we initiated to determine appropriate learning outcomes at various levels of the undergraduate psychology program—from the introductory course through the bachelor’s degree. The first steps in this direction will be taken by the newly formed APA Board of Educational Affairs Task Force on Strengthening the Teaching and Learning of Undergraduate Psychological Science. This seven-member task force made up of community college and college/university faculty met for the first time in July 2005.

A number of other developments, new partnerships are being forged with other organizations devoted to the teaching of psychology, including STP, TOPSS, Psi Beta, and Psi Chi, for projects such as the Ethnic Minority Recruitment Project described in an article by Deb Park in this issue.

PT@CC has also decided to become involved in projects closer to your home campus—at the regional and local levels. In addition to the APA convention in New Orleans in August 2006, a number of regional and local conferences aimed at psychology faculty will be offered throughout the year. Information about our activities and new projects will be posted on our Web site.

As you look forward to your new academic year, make getting more involved in PT@CC one of your new Academic Year’s resolutions. We’d love to hear from you!

Have an enlightening, exhilarating, and prosperous New Academic Year!

Patricia Puccio, EdD
Chair, PT@CC Committee
Puccio@cdnet.cod.edu

Tell Us About Your Professional Development Needs

The APA Coalition for Psychology in Schools and Education (CPSE) has created a survey to determine teachers’ needs for professional development that could be provided by organized psychology.

The purpose of the survey is to gather information about teachers’ perceptions of professional development in several areas, including classroom management, instructional practices, classroom diversity, family and community outreach, and other teaching skills and knowledge informed by psychological science. The survey will help form APA professional development courses for teachers based on the needs teachers identify. We hope you will take the survey and encourage your teaching colleagues to take it as well.

The survey should take less than 10 minutes to complete and should be completed in one session. The survey is anonymous. To protect confidentiality, data will be released in the aggregate only.

The survey can be found online at http://surveys.apa.org/ed/teacherneeds2/. Please contact Ashley Edmiston (AEdmiston@apa.org) if you have any questions about this survey.
PT@ CC Electronic Project Contest

The APA Committee of Psychology Teachers at Community Colleges (PT@CC) invites your students to participate in the fourth annual APA PT@CC Electronic Project Contest! Supported through funding by the APA Education Directorate and Allyn & Bacon Publishing Company, the Electronic Project recognizes innovative and high quality electronic presentations.

The Electronic Project Contest aims to promote active learning by means of electronic presentations developed by psychology students in either of the following categories:

- Presentations designed as demonstrations or teaching modules that illustrate and explain a psychological concept, theory, or research discovery; or
- Presentations that illustrate and explain a service-learning experience or other application of psychology in the community.

Entries should be developed primarily by students and designed to explain the concept, research, or application to a 2-year college student audience. It may be helpful to think of these presentations as computerized teaching/learning modules or electronic poster presentations. Early any class project that can be put into a PowerPoint or similar electronic format will be acceptable.

The competition is open to students currently enrolled at a community college or other 2-year school. Students are eligible for the contest if they are community college students who have not previously completed a bachelor’s degree. Faculty sponsors must be members of the APA Psychology Teachers at Community Colleges (PT@CC). If you have students who might be interested in entering, tell them about this opportunity and urge them to begin work on their presentations right away. The entry deadline is May 1, 2006.

The first place winner will be awarded $500; second and third place winners will receive $300 and $200, respectively. Certificates for all winners and their faculty sponsors will be presented at the APA annual convention.

Look for the contest entry form and guidelines about the 2006 Electronic Project Contest on the Web at www.apa.org/ed/pcue/ptatcchome.html. For more information about this competition or PT@CC, please contact Martha Boenau (mboenau@apa.org).

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Misinformation is aided and abetted by the popular psychology industry, a network of self-help books, newsletters, magazines, television programs, and films that propagate a perplexing mix of both accurate and inaccurate information concerning human behavior. For example, on his popular television show, self-help psychologist Phil McGraw (“Dr. Phil”) has contributed to the public’s misunderstanding of psychology by offering to administer polygraph tests as a means of determining whether his guests are lying (Lennon, 2005).

Second, many myths serve important psychological needs. For example, the widespread, but false, belief that astrological signs can be used to predict the future may afford people a sense of control over uncontrollable life events. In addition, popular misconceptions concerning ESP, out-of-body experiences, and other paranormal phenomena probably help to satisfy many individuals’ deep seated needs for wonder and awe.

Third, many psychological myths stem from adaptive cognitive processes that have gone awry. Specifically, many of these beliefs are byproducts of heuristics—mental rules of thumb or shortcuts—that typically serve us well in everyday life but that sometimes lead us astray. One such heuristic is representativeness; the notion that we can gauge the similarity between two things by the extent to which they resemble each other superficially (Tversky & Kahneman, 1974). This heuristic often works well: For example, if I walk into a bank and see a man in a mask pointing a gun to a teller’s head, it’s reasonable for me to assume that he’s a bank robber. Because the man resembled my mental prototype of bank robber, I relied on the representativeness heuristic. But if we’re not careful, we can apply this heuristic uncritically. For example, many graphologists (handwriting analysts) claim that people whose writing contains many widely spaced letters harbor powerful needs for interpersonal distance, and that people who cross their “Ts” and “Fs” with whip-like lines tend to be sadistic (controlled research offers no support for these assertions; see Bayerstein & Bayerstein, 1992).

Third, many psychological myths underscore a crucial didactic point: Students must understand that because mistaken beliefs often derive from psychologically adaptive processes, we are all vulnerable to believing things that aren’t true.

Fourth, some psychological myths are “urban legends,” spread informally by word of mouth across generations. As in the popular children’s game of telephone, many psychological claims emanate from a grain of truth but become progressively distorted over time. For example, the belief that we use only 10% of our brains probably springs in part from early 20th century diagrams indicating that about 90% of the brain (then called the silent cortex, now called the association cortex) had no known function (Bayerstein, 1999).

Challenging my myths in introductory psychology courses requires sensitivity, at times even humor, on the part of instructors. Although some students delight in having their views about human nature challenged or overturned, many others are
Overcoming Students' Superstitious Beliefs: A Teaching Technique That Addresses Students' Superstitions

Richard L. Miller, PhD
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Teaching can be especially challenging when students come into the classroom with strongly held irrational beliefs. A survey by Gallup and Newport (1991) reported substantial percentages of the population believe in many phenomena for which there is little or no scientific support, including paranormal explanations of deja vu, subliminal perception, and the existence of extraterrestrial beings. While superstitious beliefs span many fields, including physics (perpetual motion), nutrition (fad diets), and even history (holocaust denial), the challenge is especially noteworthy in the field of psychology, where the purveyors of pop psychology proclaim many dubious, if not patently false, ideas as truth.

Students' commitment to unfounded beliefs about psychological processes is not new. In 1925, Nixon noted "The beginning student, especially, while willing to admit ignorance on many technical questions, comes to psychology with certain concepts of causation in human behavior quite firmly fixed." Have things changed over time? Not really. In fact, unfounded belief in the paranormal has increased. In a study of undergraduate college students, M. E. S. and R. F. G. (1989) found that 59% of those surveyed expressed belief in at least 1 of the 10 paranormal phenomena listed on their questionnaire.

The record of success of traditional classroom approaches in overcoming students' superstitious beliefs has been discouraging. In a course specifically designed to examine paranormal beliefs, Tobacyk (1983) found relatively little reduction in a wide range of unfounded beliefs. Similarly, W. O. O. S. (1984) found that after students had completed a reading program designed to reduce beliefs in the paranormal, scores on the 150 point Belief in the Paranormal Scale fell from the pre-course mean of 71 to a posttest mean of 51. Similarly, B. A. N. G. (1983) week-long course in parapsychology offered to participants in an elderhostel program resulted in a reduction of 8 points on the Belief in the Paranormal Scale. Finally, G. R. O. Y. (1985), whose one-semester course emphasizing methodological issues resulted in some reduction in unfounded beliefs, stated: "Should we be pleased that belief in ESP can be brought down from 85% to about 50%, or should we be seriously concerned that 50% of those tested still believe in ESP, UFOs, and reincarnation?"

When students arrive on the first day of class with a preconceived notion about the content of the class, instructors cannot assume that simply "laying out the facts" will cause them to change their minds. In fact, students are more likely to persevere in their false beliefs than readily renounce them, even when confronted with disconfirming evidence (Nisbet & Ross, 1980). Changing a false belief can be surprisingly difficult once an individual has generated ideas to support it. Thus, the assumption that students walk into the classroom with an open mind that can be easily swayed by the classroom experience is clearly not true. Indeed, students may inoculate themselves from potential cognitive changes by using various techniques, some of which may even preserve good grades. Students may superficially process the arguments to the extent that reasonable test performance can be achieved, assume that the arguments apply only in a limited context (such as the classroom), or at worst, simply ignore arguments that run counter to their present beliefs. The problem of how to change a student's mind seems to be more difficult than how to fill a student's mind.

One promising approach for changing irrational beliefs is derived from Festinger's (1957) theory of cognitive dissonance. According to Festinger, beliefs and attitudes must maintain a degree of consistency. Inconsistent or contradictory beliefs and attitudes create a state of dissonance, which is said to be an unpleasant and highly motivational state. While in a state of cognitive dissonance, participants are driven to reduce the cognitive tension by somehow resolving the conflict between cognitions. To create this cognitive tension, a technique called counter-attitudinal advocacy can be employed. When using this technique, students are asked to explain why the opposite of their own beliefs might be true, which provides an opportunity for a less biased consideration of the evidence.

Various factors are important to the success of counter-attitudinal advocacy in changing attitudes. First, the student must engage in the activity freely without being coerced. Second, the advocacy is most effective if done individually rather than in a group writing situation. Aiso, the amount of effort expended in the counter-attitudinal advocacy can increase the amount of attitude change.

Research by M. L. I. and his colleagues (1998, 2001) confirmed the effectiveness of using counter-attitudinal advocacy in the form of a written essay, in overcoming students' paranormal beliefs. In comparison, reading another student's persuasive essay was not as effective in overcoming erroneous beliefs. Furthermore, merely taking notes while listening to a...
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Professionally resistant to evidence that contradicts their cherished beliefs. As a consequence, an instructor must take special pains not to imply that students who adhere to these myths are foolish or ignorant.

As noted earlier, I frequently remind students that we are all prone to false beliefs. It can be helpful to point out that everyone in the classroom—including the instructor—sensibly holds at least some beliefs that will turn out to be dead wrong. It can also be helpful to tell students that as a high school or college student, you held many of these psychological misconceptions, too.

Finally, as instructors, we must remain cognizant of our obligation to not only disabuse our students of misinformation, but to give them accurate information in return. As astronomer Carl Sagan (1979) reminded us, the best antidote to pseudoscience is give them accurate information in return. As astronomer Carl Sagan (1979) reminded us, the best antidote to pseudoscience is

References


Beyerstein, B. L. (1999). Whence cometh the myth that we only are better at detecting lies than people without brain damage.


APA Electronic Project Contest

Winners 2005

During the spring, the APA Committee of Psychology Teachers at Community Colleges (PT@CC) announced the third annual APA Electronic Project Contest to recognize innovative and high quality electronic presentations by community college psychology students.

The APA Committee of Psychology Teachers at Community Colleges extends thanks and appreciation to the APA Education Directorate and our contest co-sponsor, Allyn & Bacon Publishing. In addition, special thanks go out to all of the students who participated in the 2005 competition. Join us in congratulating this year’s winners and their PT@CC sponsors:

First Place: A Tale of Two Snakes – Classical Conditioning in Feeding
Presentation by Brandon Burton of Irvine Valley College (CA)
PT@CC Sponsor: Professor Jerry Rudmann

Second Place: Witness to a Holocaust: The Empathy Hypothesis and the Rwanda Genocide
Presentation by Anna Larsen of Waubonsee Community College (IL)
PT@CC Sponsor: Professor Howard L. J. Cot

Third Place: Minimize Me (Eating Disorders and the Media) and The Natural Science of Psychology
Presentation by M. Chiara A. Cunzo, Amanda L. Lance, and K. R. Burns of Suffolk Community College (NY)
PT@CC Sponsor: Professor Claire Rubman

Visit the PT@CC Web site to view the winning projects at www.apa.org/ed/pcue/ptatcchome.html.

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Psychology Teacher Network Fall 2005

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Mars and Venus in the Classroom

Nora S. Newcombe, PhD
Temple University

Students often have extreme opinions about gender. Many students are convinced that gender is completely learned—a social construction that could be changed by appropriate environmental rearrangements. Many other students think, with equal passion, that gender is obviously biological and that hormones and differently constructed brains dictate behaviors that are worlds apart—Mars and Venus. Of course, many of their elders hold similarly extreme beliefs. The covers of Newsweek and Time and other popular magazines regularly vacillate between the two options, although biology has been appearing to beat sociology lately.

Who do we actually know about gender, and how should we approach gender issues in teaching? For many psychologists, the answer begins with two propositions. One key point to make to students is that men and women are not worlds apart—they don’t so much inhabit Mars and Venus as attend the same high schools while following somewhat different schedules. Put more technically, male and female distributions often overlap substantially. A second key idea is that nature and nurture are not engaged in an all-out war in which one must be declared the victor. Rather, both contribute to sex-related differences—a truism of modern social science that is interactionism is the winner of the nature-nurture war.

Although these two ideas are helpful, I don’t think they are the end of the story of how to think about gender, or how to teach it. The problem with overlapping distributions is that they are very difficult to communicate so that they really influence thinking. Students who don’t have a feel for statistics and distributions relapse with ease into M and V as a template. The problem with the second idea is that it is very abstract, and often sounds more like a ploy than a scientific hypothesis. It also easily devolves into a discussion of whether nature (or nurture) is more important than nurture (or nature) in accounting for gender. And that discussion about slices of the variance pie easily slips back into the nature-nurture wars all over again.

I think the remedy for these issues is simple in conception but excruciatingly hard to execute: We need to teach more about the complicated and messy science that struggles with the facts on the ground. Thinking like a scientist is a more important educational goal than transmitting particular pieces of knowledge. Empirical data is not unimportant (after all, scientists spend a lot of time and money studying them and their brain correlates in a state not influenced by nurture); it also easily devolves into a discussion of whether nature or nurture is more important than nurture (or nature) in accounting for gender. And that discussion about slices of the variance pie easily slips back into the nature-nurture wars all over again.

I think the remedy for these issues is simple in conception but excruciatingly hard to execute: We need to teach more about the complicated and messy science that struggles with the facts on the ground. Thinking like a scientist is a more important educational goal than transmitting particular pieces of knowledge. Empirical data is not unimportant (after all, scientists struggle to accumulate evidence), but we need to be more forthright about what we do not yet know, as well as transmitting what we do know and what we can do with what we know now.

To aid in the enterprise of teaching about women and men, I list here, and discuss in too brief a fashion, four myths about gender. In the interests of equal opportunity criticism, the first two myths are “nature” myths, and the second two are “nurture” myths.

Myth 1: Male and Female Brains Are Different
It is easy to find strong claims about sex and the brain. They are usually stated circumspectly in scientific articles, but blare out excitedly from more popular outlets. For example, in newspapers, we can read that there has been a “Possible Basis Found for the Cliche Depicting Men as Mores Hot-Headed Than Women” (http://www.upenn.edu/researchat-penn/article.php?461&sci) or are asked “Do you have a male or female brain? Take the test” (http://www.guardian.co.uk/life/feature/story/0,13026,937913,00.html).

The first headline comes from a press release describing findings by Ruben and Raquel Gur that the ratio of volume of the orbital-frontal cortex to volume of the amygdala is greater in women than in men. The second comes from a newspaper article on Simon Baron-Cohen’s (date) book claiming “that the female brain is predominantly hard-wired for empathy, and that the male brain is predominantly hard-wired for understanding and building systems.”

There is a simple problem, however, with work on male and female brains. The brain reflects an individual’s history of living in the world as well as the influence of genetics or hormones. Thus, studies of brain functioning or the relative size of various parts tell us nothing about how gender differences came into being. While it might seem that the problem could be addressed by studying infants, the matter is not so simple. Infants are rarely aggressive or empathetic as adults understand the term. Rather, these characteristics themselves emerge during development, so that studying them and their brain correlates in a state not influenced by nurture is likely impossible.

Note that a corresponding nurture myth could state that “male and female brains are the same.” However, such a statement would also be untrue, because we have in fact documented some differences. Hence, the real state of play right now is that scientists have observed a few differences between men and women in brain structure and functioning as well as in behavior, but that the origins and the implications of these differences are not yet clear.

Myth 2: There Are Genetic Bases for Gender Differences
Although there is actually a book entitled “The Math Gene” (Devlin, 2000), and Jane Fonda has spoken about an “empathy building system.”

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lecture or repeating an outline of the material was not effective in changing paranormal beliefs.

Why does writing a counter-attitudinal essay change students’ erroneous beliefs? One possible explanation is that writing requires a certain amount of effort. A second explanation could be that the arguments individuals generate for themselves are the most convincing, at least to those individuals. As Greenwald (1968) pointed out, self-persuasion is more effective than listening to the arguments of others because it is more salient, more personally relevant, and more memorable.

To make effective use of counter-attitudinal advocacy as a classroom technique, one should ensure that several conditions are met. First, the instructor must maintain the appearance that the student has a degree of free choice in the assignment. This can be done by making the essay-writing task optional (e.g., done for extra credit) or by allowing students to choose freely from the many topics about which they have erroneous beliefs.

Second, the advocacy task should be one in which the student is clearly responsible for the arguments he or she generates. Therefore, group assignments are not recommended. Third, the greater the amount of effort expended in the advocacy task, the greater the likelihood that change occurs. However, overexposure to counter-attitudinal messages should be avoided because there is some evidence that maximum change occurs with three exposures to a counter-attitudinal message but that five exposures reduces the amount of change.

A second cautionary note: Fried and Aronson (1995) developed a variation of the counter-attitudinal advocacy technique that is called hypocrisy induction, in which the student is confronted by the inconsistency between his/her beliefs and actions, for example, belief in conservation and wasting water. In applying this technique to students’ paranormal beliefs it could be tempting to point out the inconsistency between being a bright educated student, and being superstitious. A recent study by Stickney, Dymak and Bechtol (2004) has shown that this can backfire. Telling a student what they should believe in order to be considered bright and capable can create psychological reactance and result in greater commitment to the student’s superstitious beliefs.

Finally, teachers should note that in most previous research using the advocacy technique in the classroom, the technique was applied toward the end of the course, after students had been introduced to the scientific method, critical thinking, and relevant content. Assessment of their counter-attitudinal essays indicated that the students’ arguments reflected this grounding in the scientific literature. Thus, the timing of this exercise may be important to ensure meaningful change. Also, within the constraints listed earlier, advocacy tasks are not limited to essays, but could include debates, oral presentations, or other activities that provide a forum for self-persuasion.

References


Best Practices in Teaching Psychology Conference

Engaging Minds: Best Practices in Teaching Critical Thinking Across the Psychology Curriculum

Atlanta, GA

September 30-October 1, 2005

The Society for the Teaching of Psychology (STP), the National Institute on the Teaching of Psychology (NITOP), and the Kennesaw State University Center for Excellence in Teaching and Learning (CETL) are excited to announce the fourth conference in the popular “Best Practices in Teaching Psychology” series. Following the successful Assessment (2002), Teaching Introductory Psychology (2003), and Teaching Statistics and Research Methods (2004) conferences, the 2005 conference will focus on innovative and effective strategies and techniques for teaching critical thinking across the psychology curriculum.

The 2-day conference will be held at the Crowne Plaza Atlanta-Perimeter N.W. Hotel. Made possible after the format of the previous conferences, the meeting will include keynote speakers, concurrent symposia and workshops, and poster sessions. Our target audience includes teachers from high school, 2-year, 4-year college/university, and graduate school settings.

The conference Web site includes the full schedule (including session abstracts) and registration information (see http://www.kennesaw.edu/cetl/criticalthinking/ccindex.htm).
Imagine how much psychology you could learn if you spent a week with 300 other psychology teachers. This opportunity arises every year when psychology teachers from around the country congregate to grade the Psychology Advanced Placement tests. Jane Halonen, the chief reader for the Psychology Advanced Placement test, notes that at the annual reading week for AP Psychology, you have the opportunity to spend time with some of the best and most creative psychology teachers in America in both structured and casual settings.

Participation in the annual reading of AP Psychology tests provides an excellent way to expand your horizons and to develop professionally. Each year, high school and college teachers congregate and collaborate to score the thousands of tests taken by high school psychology students. Readers receive a stipend for the work; in addition, Education Testing Service (ETS) covers travel, food, and accommodations for the week.

The original Psychology AP reading took place at Clemson University in 1992, with 3,000 tests to be scored. The 2005 reading week took place in Daytona Beach, FL, where it has been for several years. The readers scored roughly 98,000 tests; this figure places psychology well into the top 10 Advanced Placement subjects. The number of AP Psychology tests (and, correspondingly, the number of readers) has increased significantly each year since the test’s inception. In fact, between 1996 and 2004, psychology grew by 394%, according to the College Board. And from 2004 to 2005, the number of students who took the psychology test increased by about 35%.

Readers benefit from the experience in a number of ways. For one thing, teachers learn about the scoring process first hand. This can be invaluable in how you help your students take the test. As everybody knows, students need to know psychology in order to be able to do well on the test. But students who have good strategies for answering the questions will perform at a higher level on the test than will students without good strategies. These useful approaches to taking the test are available in the material provided by ETS, but seeing them in application can be very instructive for a teacher.

Rob McEntarffer of Lincoln Southeast High School in Lincoln, NE, has been a participant for a decade. He recognizes how valuable his experience as a reader has been, stressing that he learned how to build a useful rubric that specifies the core components of a sound answer. A good rubric also leads to consistent grading. Not only does this experience help him prepare his AP students for the test, but it helps him in his own test construction and scoring.

Rob has written that “If I spend the time to make a very complete rubric for the essays I assign in my class, I know this work will pay off in time spent grading.”

To understand how the week evolves, it is useful to get a sense of the schedule. At first, the reading period sounds unimaginable. Readers begin grading the handwritten essays, some of them nearly illegible, at about 8:30 in the morning, and end around 4:30 in the afternoon. This schedule repeats itself every day for a week, until all exams are scored.

Professional Development Through Advanced Placement Psychology

Barney Beins, PhD
Ithaca College

To be eligible to become an Advanced Placement Reader, you need to have taught AP Psychology for 3 years (for High School teachers) or have taught a comparable college-level course within the past 3 years (for college teachers).

If you meet the criterion for becoming a Reader, you should check the Educational Testing Service (ETS) Web site (http://www.ets.org/reader/ap/info.html). There are general information and instructions for submitting an online application, which must be followed up with a copy of your vita and your course syllabus.

There may be a waiting list, so if you apply, you may not receive an appointment for the subsequent reading. Appointments are for a single year, but it may be possible to continue across years.

If you have any questions about applying, you can contact ETS by phone Monday through Friday 9:00 a.m. to 4:00 p.m. Eastern Time at 609-469-5384, by e-mail, or via the traditional post at the following address:

ETS
Attn: Performance Assessment Scoring Services
Mail Stop 09-Z
Princeton, New Jersey 08541

Professional Development, continued on page 16
TOPSS Workshop:
Promoting Research and Integrating the Neurosciences in the Introductory Psychology Classroom
New Haven, CT
Friday, October 14, 2005
9:00 a.m. to 12:00 Noon

This half-day workshop, to be held in conjunction with the Northeast Conference for Teachers of Psychology (NECTOP) and the New England Psychological Association (NEPA), will focus on integrating research experiences into the introductory psychology classroom and supervising students in original research. Presenters Wesley Jordan, PhD (St. Mary’s College of Maryland, St. Mary’s City, MD), and A. Ilyson Wesley, Ed.D. (Roslyn High School, Roslyn, NY), will also discuss ways in which neuroscience can be taught to students. This workshop is designed for teachers of introductory psychology courses, whether taught in high school or college. Registration fees are $50 for APA, TOPSS, and PT@CC members and $55 for nonmembers and include registration for the NECTOP meeting taking place on Friday, October 14.


Attention West Coast TOPSS Members! TOPSS Workshop: Culture and Learning
San Francisco, CA
October 21, 2005

TOPSS is pleased to announce a full-day workshop on Friday, October 21, to take place at the San Francisco State University. David Lechuga (The Neurobehavioral Clinic, Lake Forest, CA), David Matsumoto (San Francisco State University, San Francisco, CA), and Gale Ow (Lowell High School, San Francisco, CA) will present on various cross-cultural issues that are connected to the high school classroom. In addition, Kristin W. Hiltcock (Viewmont High School, Bountiful, UT) will present on critical thinking and using the National Standards for the Teaching of High School Psychology in the classroom. Visit the TOPSS Web site at http://www.apa.org/ed/topss/conf_wishop.html for additional details and registration forms.

The Seventh Annual Mid-Atlantic Teachers of Psychology Conference
Prince George’s Community College
Largo, MD
Friday, October 14, 2005

The seventh annual MATOP conference will focus on “Teaching Research: Best Practices in Methods and Strategies.” The conference will feature Stephen L. Chew, PhD, of Samford University in Birmingham, AL, as the keynote speaker, workshops, roundtable presentations, a poster session, and several exhibitors. The mission is to bring together and encourage a collegial environment for all educational levels where psychology is taught—high school, community college, 4-year college/university, and graduate levels. Contact Dr. Robin Hailstorks (hailstrj@pgcc.edu) or Dr. Swazette Young, MATOP Conference Coordinator (youngsd@pgcc.edu).
Aspiring to Excellence in Teaching?
Look to the Society for the Teaching of Psychology!

Patti Price
Wingate University

If you are reading this newsletter, then you likely share the same passion for the teaching of psychology as members of the Society for the Teaching of Psychology, Division 2 of the American Psychological Association. Our members represent a diverse group, from graduate students to teachers of psychology in high schools, community colleges, and universities, both large and small. The Society is open to all who have an interest in the teaching of psychology, whether they are members of the American Psychological Association or not. Whether you are a seasoned veteran or a future faculty member, the Society offers a place for you to grow in your field.

The benefits of joining the Society are many. Members receive Teaching of Psychology, an outstanding quarterly journal that covers teaching-related issues and offers innovative activities that can be used in the classroom to promote student learning and retention. The journal covers topics from ideas on teaching specific courses to technological issues to issues such as testing, team teaching, student motivation, and letters of recommendation. Additionally, twice per year, members receive the Society’s printed newsletter. The newsletter contains not only news of the Society, but articles on teaching issues as well.

Beginning in 2001, the Society has continued to contribute to the scholarship of teaching through the publication of five e-books. The first of these e-books, The Many Faces of Psychological Research in the 21st Century, offers the teacher of psychology an opportunity to introduce students to research and to reenergize lectures with new information. The three e-books following this initial publication are dedicated to the promotion of excellence in teaching as the name, Essays in the E-xcellence of Teaching, suggests. Each of these e-books is a compilation of sage advice from teachers of psychology and offers ideas not only for the new teacher but for the seasoned veteran as well. In 2004, Preparing the New Psychology Professoriate: Helping Graduate Students Become Competent Teachers was published. This e-book provides information on training, applying for an academic position, and making the transition to the life of an academician.

Perhaps one of the most valuable resources is offered by the Society’s Office of Teaching Resources in Psychology. Peer-reviewed materials include information on a wide variety of teaching-related topics ranging from advising, course syllabi, and classroom tips to peer review, hosting a conference, and preparing poster presentations. Most resources are easily available via download. Additional services available to members include a mentoring service, a departmental consulting service, and Instructional Resource Awards, which are annual awards to support the advancement of teaching.

The Society also awards faculty members for excellence in teaching in five categories: high school, community college, graduate student, new faculty, and seasoned faculty. Faculty members who have been teaching 5 years or fewer may apply for a cash award to assist them in attending and presenting at a teaching conference. These awards are presented twice per year. Also at the regional teaching conferences and one national conference, the Society supports the scholarship of teaching by recognizing the author of the outstanding poster presentation with an award.

The Society also sponsors programs at conferences directed toward promoting excellence in teaching. Programming in the form of invited addresses, symposia, papers, and poster sessions can be seen at the American Psychological Association Convention annually. Preconference teaching sessions are also offered at the annual meeting of the American Psychological Society and at specialty conferences as well. The Society also initiated annual topical conferences addressing “best practices” in teaching, covering topics of assessment, teaching Introductory Psychology, teaching Research Methods, and promoting critical thinking.

Recently, the Society for the Teaching of Psychology went further to bring teachers of psychology and those interested in the teaching of psychology together in a close-knit community with the publication of a member directory. Members can now easily locate those interested in advancing the teaching of psychology.

If you find you still can’t get enough, the Society offers a great many ways to get involved, from serving on task forces to serving on standing committees. Members can also contribute as mentors to others and as authors of resources for the Office of Teaching Resources in Psychology.

The Society offers a great way to join with others who share a passion for teaching. If you have the desire to promote excellence in teaching, simply go to our Web site www.teachpsych.org and join us PTN.

Important Reminder
Don’t forget to vote in the APA TOPSS and PT@CC committee elections!
Mars and Venus in the Classroom, continued from page 7

genetic (http://singlemothers.org/web/portal/73/modules.php?name=NewFile&file=articles&sid=3), there is not yet good evidence linking complex behaviors such as mathematical achievement or empathy to any particular genetic locus. Thus, although maleness and femaleness at a physical level are typically produced in humans by a genetic mechanism that begins with having an X or an XY genotype, mapping sex-linked differences in complex behavior to the genes is currently merely a promising note. We do know the sex-linked mechanisms underlying male vulnerability to color blindness or hemophilia, but relatively few X-linked or Y-linked traits have real psychological interest.

Note again that a corresponding nurture assertion would be that men and women do not differ genetically in ways that count for determining anything other than obvious physical characteristics. But we don’t know that either. The human genome has been mapped, but work on the determination of what the sequences do or entail is barely begun. In the next decade (or two or three), we are likely to see an outpouring of information. It will be wildly exciting to hear the tale, but my bet is that we will be reading a book with many chapters and a good deal of complexity, not a short story.

M yth 3: T here Are Many D ifferences in H ow Boys and G irls Are R eared

A centerpiece of the nurture argument about the nature of gender is that it seems obvious that we treat boys and girls very differently. One of the first questions we ask about a baby is, “Is it a boy or a girl?” and after that fateful question is answered, we give babies sex-differentiated names, wrap them in pink or blue blankets and buy them dolls or trucks. With such very different expectations and norms, to environmentalists it seems absurd to suggest that gender is anything much more than a social construction. T here is in fact some support for the idea of differential treatment, for example, in the “Baby X” studies in which adults view babies differently when they are told they are boys or girls (even though the same baby is actually viewed by all participants) (for a review, see Stern & Karraker, 1989). H owever, parents do not distinguish between boys and girls as much as one might imagine, and a goodly number of studies have shown that differences are few and far between (Lytton & Romney, 1991). Parents may care more that their children of both sexes develop into responsible, smart, caring individuals than anything else.

There is an environmentalist answer to this body of evidence though. First of all, parents are concerned that their children conform to sex stereotypes, so even though they may reward empathic acts equally or punish aggression equally, there may well be many behaviors to which they respond differently (such as difficulty with mathematics homework, because math is a sex-typed domain) (Ciccarelli, Jacobs & H arold, 1996). Second, there are subtle differences in how parents treat boys and girls, such as explaining science exhibits more thoroughly to boys (T enenbaum & L eaper, 2003) or talking about emotion more to girls (F ivush, B rotman, B uckner, & G oodman, 2000). Because parents are not likely aware of these differences, it takes careful observational research to detect these patterns.

Note that this myth is a bit different from the first two, where I think the best current answer is that we know almost nothing. We know quite a lot about this myth, but unfortunately the evidence is not decisive one way or the other. For example, the proponent of innate gender differences can point out that boys or girls may give off subtle cues indicating that they like to talk about science or to talk about emotion and that parents merely pick up on these cues. Clearly, it will take a good deal more careful analysis to get to the bottom of these issues.

M yth 4: S ex D ifferences Are C ross-C ulturally V ariable

A nother centerpiece of the nurture side of the gender wars is the assertion that there are many varieties of gender expectations in the cultures of the world. Classic work in this vein is M argaret M ead’s Sex and Temperament in Three Primitive Societies (1938) and her M ale and Female A Study of the Sexes in a Changing World (1949). A corollary of cultural variability is usually assumed to be malleability—cultures can change, and so can gender. However, the hypothesis of substantial cross-cultural variability is far from proven. In fact, in the past decades, sociobiologically inclined theorists have pointed out that there are very few societies where women have more than one husband, while there are many societies in which men practice polygamy; that there are few societies where men do much child care, and so on. In addition, such theorists have claimed that history has shown that gender expectations are very difficult to alter, so that for example collective farms (kibbutzim) in Israel were unable to undermine the desire of women to care for their children (Tiger & Shepher, 1975).

While there is a compelling case for cross-cultural similarity in mating patterns and sex-based divisions of labor, it is not obvious that many interesting conclusions follow from that observation (E agly & W ood, 1999; W ood & E agly 2002). The similarities may come from biology, but it might be a biology of reproduction rather than a biology of mind. That is, as long as human societies had high child mortality rates, little ability to provide babies with food other than milk, and a need for labor and defense that required upper body strength, it made sense for women to spend a good deal of time around a home base while pregnant and breastfeeding, while men hunted, farmed, or went to war. Industrialization is relatively recent, and it is even more recently that a great deal of labor in the developed world has not depended on musculature. Low infant mortality rates, reliable contraception, and zero population growth are also modern phenomena. Given the inertia associated with social arrangements, it is unsurprising that change is difficult, but it seems to be afoot. For instance, marriage patterns are undergoing alteration (Sweeney, 2002).

This myth is thus similar to M yth 3 in that we know a good deal about cross-cultural variability (or the lack thereof). What is not yet clear is what this fact means, if anything, for the nature-nurture debate or for the possibilities for social change. In fact,
ACTIVITY: Debunking Psychics in Introductory Psychology

Christine Smith
Antioch College

Throughout my 10 years of full-time teaching, I have encountered many students who believe in pseudoscientific claims or other claims that reflect suspicion or dismissal of scientific claims or beliefs. For example, in an Introductory Psychology lab a few years ago, most of my students believed the moon landing was faked by the government. Every semester, I am startled by the number of students who major in psychology who believe that daily events can be predicted by one's astrological sign. As a social psychologist, I am aware of the Barnum Effect, individuals often accept vague generalizations of themselves as accurate. I also have a strong training in the scientific method, and I see one of my roles as an instructor is to share how the scientific method can be used to challenge pseudoscience.

For the past several years I have included in my Introductory Psychology course a segment on debunking psychics. I initiated this activity to improve students' critical thinking skills as well as introduce them to the scientific method and research methodology (and, of course, because I was frustrated by how many students took psychic claims at face value). I make an attempt to integrate issues around pseudoscience in all my courses (a great resource is Michael Shermer's 1997 book Why People Believe Weird Things). Although I teach at a 4-year liberal arts college, the activity I am discussing here is also suitable for high school students. By addressing how our perceptions can be manipulated, with careful observation we can often examine phenomena that are allegedly beyond the explanation of the standard cognitions and behaviors of psychology. As a result, all of us can improve our skills as consumers of both science and pseudoscience.

I conduct this activity early in the course, on the second or third day of class. On the first day of class, I begin with a true/false quiz of common misperceptions of psychology and behavior, including "People's general personality traits can be predicted by knowing their birth date and time of birth." This exercise serves as a nice precursor to the debunking psychics activity, because I find that a number of students endorse this and other beliefs about pseudoscientific claims.

To prepare for the current activity, I record a television segment of "Crossing Over With John Edwards." Other options for taping are "James Van Praagh's By-your-Side" or Sylvia Brown's periodic appearances on the "Montel Williams Show." The clip should be long enough to include one full psychic reading of one audience member, usually about 15 minutes. Of note is the fact that just about any episode will suffice, because "cold reading" is the basic tenet of these performances and is the phenomenon that is addressed in the activity.

In class, I hand out "The Art of Cold Reading" by James Randi http://www.randi.org/library/coldreading/. Cold reading is a technique that psychics use when they attempt to "read" information from the audience without any prior information, with the implication that these insights arise from supernatural sources (Underdown, 2003). Because the Randi piece is a short article, it can be given at the beginning of class. I then provide my students with a series of questions to answer while watching the clip that requires them to code for specific responses by the psychic. The questions on the checklist include:

1. How many actually attempts to guess or gather information did the psychic use?
2. How many "hits" did the psychic get (i.e., how many facts in the reading were correct)?
3. How many of those "hits" were specific (for example, the psychic pointed to a specific audience member and said "your husband Jacob died of liver failure" without previously being told a name or sickness)?
4. How do the audience members seem to respond to the psychic's attempts to read their information?

Announcing the APA Online Psychology Laboratory (OPL)

Are you looking for innovative new resources to enliven your classes this fall? The new Online Psychology Laboratory (OPL) will be available September 1, 2005. OPL will offer highly interactive, science based, activities and demonstrations. Students will be able to participate in classic experiments and class data can then be downloaded to illustrate psychological phenomena. Demonstrations and activities will be added throughout the semester, so we invite you to use this new teaching resource. You can find OPL at http://opl.apa.org.
Incredible Day-Dream

Debby Park, Past-Chair (2004) TOPSS
Rob McEntarffer, Past-Chair (2002) TOPSS

Nearl y a century ago, in September 1909, a very select group of psychologists gathered for a conference at Clark University in Worcester, Massachusetts to celebrate the institution’s 20th anniversary. William James, who attended some of the lectures, commented to one of the participants in attendance that “the future of psychology belongs to your work” (Koelsch, 1984). The same might be said to participants of the first annual APA/Clark University Workshop for High School Teachers, held in June 2005 on the Clark campus. All funding for the workshop was provided through a generous gift from Dr. Lee Gurel, an APA member and Clark alumnus, to both the American Psychological Foundation and Clark University.

Upon arrival to campus, it is clear to see why Carl Jung described the area as “utterly charming” (Koelsch, 1984), the university campus as “richly endowed... small but distinguished”. We couldn’t describe our first impressions any better. Our weekend at Clark began with the arrival of 25 very enthusiastic teachers of psychology representing Maine, Massachusetts, Rhode Island, Vermont, Connecticut, and New York. As Rob and I greeted them, we knew that this weekend was going to be very special.

Our first official activity on Friday, June 24, after introductions in the Jonas Clark H all Room (where we were being “watched” by photographs of all the Clark University graduates who received a PhD in psychology from Clark), was a tour of the Clark Psychology Department. The tour included time in G. Stanley Hall’s office. Dr. Nancy Budwig shared historical documents, pictures, and information about Clark’s history, including information about the 1909 conference, with our group to help us understand the significance of Clark in the history of psychology. Following this presentation was a reception in the Clark Archives in the lower level of the Goddard Library. Reading letters written by Freud and Jung and viewing original tools used by psychologists in their research experiments left us all in awe. After the reception in the archives we enjoyed an elegant dinner with Clark University President John Bassett at President and Mrs. Bassett’s home, the Harrington House, on campus. The dinner truly set the tone for the workshop.

On Saturday, June 25, Clark University psychology professor James Cordova, PhD, presented on his research focusing on marital/couple health. Professor Nancy Budwig, PhD, later presented on developmental psychology research. Both sessions provided participants with the latest research and methodologies in each respective field. Rob and I, representing APA Teachers of Psychology in Secondary Schools (TOPSS), shared various teaching activities with the participants. A Saturday evening picnic was held at a nearby lake. Informal sessions were held for participants both Friday and Saturday evenings back at the dorm.

The Sunday morning sessions focused on research. We discussed how to involve our students in research and presented from the new TOPSS publication Conducting Psychological Research for Science Fairs: A Teacher’s Guide and Research Manual, which all participants received (participants also received resource books, free textbooks, and a CD of activities). Participants shared many great ideas and activities. Clark University psychology professor Michael Bamberg, PhD, discussed the importance of Institutional Review Boards and teaching ethical standards to young researchers during our final session on Sunday.

Of course, the conference was not all lectures and demonstrations. What we all gained is hard to put into words. Several of our new friends and colleagues have commented that this had been the best professional development experience of their careers. I think we can sum it up best with comments by Ed Heyman, a teacher from Rochester, New York:

"It was truly a memorable experience for me. Everything about the conference was outstanding. The organization of the workshops was concise. The information presented was timely. The ability to network with other teachers was invaluable. The accommodations were comfortable and even the food was great! I truly felt like a valued colleague in the field of psychology."

Please visit http://www.apa.org/ed/topss/clark_summary.html for more information on the APA/Clark workshop. This annual workshop will be held again in 2006.


APA/Clark University Workshop participants with statue of Sigmund Freud on Clark campus — Photo by Maureen McCarthy
What Does the Term "Heritability" Mean?

by Alan Feldman
Perth Amboy High School
Perth Amboy, NJ

Heritability is a term that appears in introductory college/advanced placement psychology texts in the intelligence chapter, and sometimes in a section that discusses the relative influences of nature and nurture. Most of the time the discussion is rather brief, and a more in-depth analysis would be helpful. It is my hope that this article clarifies this concept somewhat.

1. If a person has a disorder that has a heritability of 1, then the person will have the disorder. (True or False)

2. The heritability of having five fingers on each hand is 1 or close to 1. (True or False)

3. Heritability and inherited are nearly the opposite in meaning. (True or False)

4. In the mid-1950s in America, the heritability for wearing earrings was very high. (True or False)

5. The heritability of identical twins is 1. (True or False)

6. As the environment gets more similar for individuals of very different genetics, heritability increases. (True or False)

7. The heritability of a group of individuals with relatively similar heredities in very different environments is relatively low. (True or False)

I will first explain heritability and then return to a discussion of the examples to clarify the concept. Heritability statistics resulted from the work of Francis Galton, who was Charles Darwin’s cousin. Heritability is a group statistic that makes no sense when applied to one person. Heritability is the extent to which differences in the appearance of a trait across several people can be accounted for by differences in their genes. Heritability does not reflect the extent to which traits will be passed down from parent to offspring. Heritability estimates are usually generated by twin studies. For example, if identical twins usually have similar IQs, but fraternal twins sometimes do not, the differences among the fraternal twins must have resulted from what is different between them, which is not different for the identical twins. It is quite reasonable to assume that the difference is genetic. So, if IQ is very heritable, it means that individuals with the same genes have similar IQs, and individuals with different genes have relatively different IQs.

Problems result when consideration is given to what heritability doesn’t mean. When discussing an analysis of the heights of fraternal and identical twins, the behavioral geneticist Robert Plomin found the results indicated heritability for height to be 90%. This is often misinterpreted, for it does not mean at all that people’s heights are determined 90% by genetics and 10% by the environment. Heritability estimates are not measures of the importance of genes in the production of a trait or how modifiable a trait is to environmental influence. Heritability statistics do not in any way reflect the relative importance of genes in explaining traits. Heritability estimates only reflect what causes the variation in traits; they say nothing about what causes the traits themselves. If this seems quite confusing, good; you are on your way to understanding heritability.

There is an important meaningful distinction between explaining the variation among traits and explaining the causation of the traits. Think of snowflakes and assume that both high humidity and low temperatures are essential for snowflakes to form. So, if on a particular day humidity is very high at the North Pole, and very low at the South Pole, snow will only fall at the North Pole. This can fully account for the variation in snowfall between the North Pole and the South Pole on that day. However, this accounting for variation should not be taken to imply that low temperature is unimportant in causing snow; obviously temperature is a very important factor. When a factor does not vary across situations, it cannot account for the variations in outcomes across those situations, but this does not mean that this constant factor is unimportant in causing the outcome. This accounting for variation tells us little about causation. This is possibly true when explaining our traits. It is very possible that genetic factors account for 90% of the differences seen in people’s heights but this does not mean that genetic factors are necessarily more important than environmental factors in causing people’s heights. Twenty-five years ago, the scientist Richard Lewontin devised an insightful demonstration to show this. Imagine planting ordinary genetically diverse seeds into two radically different environments and then allowing them to grow to their full heights. One environment is very deprived with just barely enough light, nutrients, and water for survival. The other environment is enriched with ideal amounts of light, water, and nutrients. All of the variation in height within each tray must be due to the genetic diversity of the seeds, since the seeds developed in identical environments, and therefore the variation observed in the heights of the plants within a tray cannot be attributed to differing environmental factors. So regardless of the environments in which the plants grew, heritability is 1 or 100% within each tray. Yet, obviously environmental factors played a large role in each individual tray, so even if heritability is 100%, the environment can have very powerful effects on the appearance of a trait. To restate: Because the environment for the seeds within each tray is identical, the genetic diversity of the seeds must account for the observed

Heritability, continued on page 18
American Psychological Foundation
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 2-night, 3-day, all-expenses-paid trip to the American Psychological Association’s 2006 annual convention, in New Orleans, LA, 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

APF provides nomination forms. Nominations should include the form, a statement that illustrates how the nominee fulfills the guidelines of the award, and the nominee’s current vita and bibliography. Letters in support of the nomination 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, N E, Washington, D C, 20002-4242. Requests for nomination forms may also be sent to foundation@apa.org.

Professional Development, continued from page 9

If you want a surprise, ask teachers who have done this whether they would do it again. The answer in most cases is an overwhelming yes. Readers are generally enthusiastic about returning year after year.

It is hard to explain the dynamic environment during the reading period, but readers bond with one another in small groups as they refine their skills in scoring the test. Further, as Jane Halonen stresses, “there is unbeatable humor in the shared work.”

Readers work very diligently when grading tests, but even though the work day runs from early in the morning to late afternoon, the schedule is astonishingly easy. Readers start at 8:30, but there is a snack break at about 10:15. Lunch then rolls around at noon. If people haven’t had enough to eat at breakfast, the snack, and lunch, there is another break with food around 3:00 that prepares you for dinner. After dinner, some of the evening activities include more food. (The frequency and abundance of food leads people to refer to the week as “Read-and-Feed.”) This schedule usually keeps fatigue at bay.

Even though the grading of tests dominates the week, there are other satisfying events. Some of them enhance teaching directly, like teaching activity exchanges. Others, like the professional night featuring a marvelous speaker, serve to expand knowledge that will add to your classroom environment. Sometimes, the gatherings are simply fun. Many readers take advantage of the group trip to a baseball game of the local minor league baseball team, some people play nightly tennis or basketball, and yet others get together for trips to the movies or to shop. In addition, because the reading site abuts the beach, the allure of the Atlantic Ocean can be irresistible for a late afternoon or twilight swim.

One of the most rousing events is the culminating performance on the final night of the reading when all the pressure is off. The talent might be minimal, but the enthusiasm is maximal.

The next day, people return home, pleased that the grading is finished, but sad to see friends depart. Hopefully, there may be 100,000 tests or more next year, so the process repeats itself, and the participants are eager to return. PTN

National Council for the Social Studies (NCSS)
Annual Conference
Kansas City Convention Center
Kansas City, MO
November 17-20, 2005

Save the date for the annual conference. Visit http://www.ncss.org for details.
APA Selects Intel International Science and Engineering Fair Winners

The annual Intel International Science and Engineering Fair (ISEF) was held May 8-13, 2005, in Phoenix, AZ. Over 1,300 students from more than 40 nations competed for scholarships, tuition grants, and internships in one of 14 categories, such as behavioral science, biochemistry, computer science, earth and space sciences, engineering, mathematics, medicine and health, and microbiology. APA was one of more than 70 professional organizations, representing a wide variety of scientific disciplines, that presented scholarships to student winners. During 2 days of judging, a panel of volunteer psychologist judges selected the top six finishers from 79 science projects related to psychology. The APA student winners were:

First Award of $1,000
Nissa Leigh Schmidt,
Merino High School, Merino, CO
"The Psychopharmacological Effects of Antidepressants on Procambarus clarkia"

Second Award of $500
William Amado Green,
Rio Rico High School, Rio Rico, AZ
"Origins of Mass Polarization in the Tucson Electorate"

Third Award of $250
Ameen Abdulrasool,
Lane Technical High School, Chicago, IL
"Prototype for Autonomy: Pathway for the Blind"

Honorable Mention Awards
Ilang Mae Guiroy,
The York School, Monterey, CA
"Quantitative EEG as an Identifier of Learning Modality"

Kayla Marie Cornale,
Assumption Roman Catholic Secondary School, Burlington, Ontario, Canada
"Sounds Into Syllables: A Teaching System for Autistic Children"

Jonathan Yong An,
Emerald Ridge High School, Puyallup, WA
"Edge Integration in Human Brightness Perception"

All finalists received a certificate and student affiliate membership in APA.

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http://www.upenn.edu/researchatpenn/article.php/44616
Debunking Physics, continued from page 13

After seeing the clip, students tally their responses to the first three questions. Invariably, students will see very quickly that most of the psychic’s probes are incorrect, and very few are specific. I then lead students into a discussion of scientific beliefs—specifically, what we can study. For example, we can systematically study whether a specific observable behavior occurred, for example, whether a statement about who died is correct. This activity also provides an opportunity for the instructor to introduce the scientific method and the use of scientifically controlled conditions to test the validity of claims.

I instructors must be sensitive in managing students’ responses to this activity, as they tend to quickly connect this classroom activity with the pseudoscience survey given on the first day of class. Students who previously endorsed beliefs in pseudoscience may react with resistance or embarrassment. A key strategy to making this activity successful is to emphasize that rather than debunking psychics, or any other specific aspect of pseudoscience, the goal of this activity is to equip students with tools they can utilize to evaluate scientific and pseudoscientific claims both inside and outside of the classroom. This exercise also provides an opportunity to discuss why people continue to believe in the powers of psychics despite the fact that they can easily observe that the psychic is rarely specific or accurate. Question four on the checklist can also be addressed, because we can discuss who the audience is and what motivations they have to suspend disbelief. This can complement the discussion of scientific methods because it addresses why people may be reluctant to think critically in specific circumstances, and it may assuage feelings of gullibility of the part of the student.

The debunking psychics activity gives students an opportunity to examine critically a phenomenon that is often taken at face value by many people. Additionally, it gives a small introduction to both critical thinking and the scientific method, as students code data and interpret findings. On my course evaluations, students often report that this was one of the most memorable parts of the class. It is clear that this early demonstration informs how students respond to later discussions of research. I see it as my one small step toward early demonstration informs how students respond to later the most memorable parts of the class. It is clear that this course evaluations, students often report that this was one of

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References


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Heritability, continued from page 15

height differences—so the heritability within each tray is very high—probably close to 1. Yet, the heritability between the trays is very low because the environments are so disparate and the genetic material is similar. The large observed differences in height between the trays are due to environmental differences.

A nother example by Stephen Jay Gould is illuminating. Think about the relative heights of men in a poor village in a developing country 100 years ago. The average height for these malnourished men might be 5’ 2”. The heritability in observed heights within this particular society can be quite high; men of tall fathers are on the average considerably taller than men of short fathers. However, this is because nutrition and environmental conditions would not significantly raise the average height of this group in a few generations.

This reflects one of the many significant errors of H. ebein’s book, The Bell Curve. The error is to assume that genetic variation can account for variation within a group is also the reason for the variation between groups. The converse is also true. Even if the heritability of a trait is zero, it can still be tremendously affected by environmental factors. I imagine taking a bunch of genetically identical seeds (cloned if necessary) and scattering them in a variety of soil types. All the variation in the plants’ heights would be attributed to the environment (because the seeds are genetically identical), so the heritability of height here is zero. Yet, no one could reasonably argue that the genetic information in the seeds has no effect on the plant’s height. Compare dandelion seeds and those of the California redwoods. So, a trait can be importantly affected by genetic factors even if it is not heritable at all. If both fully heritable and fully non-heritable traits can both be significantly affected by environmental and genetic factors, then how do they differ? In terms of the extent to which the environment and genes might affect traits—there is no difference. Heritability estimates tell us nothing about how genetic and environmental factors affect traits. So, remember that when someone might mention or report that IQ is highly heritable, it does not mean or imply that environmental resources should not be employed to raise IQ scores. To say that high heritability estimates of IQ scores are less open to environmental interventions is false. It is false because environmental interventions can greatly affect even maximally heritable traits. You might ask then what is the point or use of heritability estimates. They can estimate the sources of differences among people; but only for a particular population at a particular time and in particular circumstances. Heritability estimates cannot be generalized because as the situation changes the estimates can change drastically. To illustrate this, think of the snowfall example again.
Book Review:
Ethics of Inquiry: Issues in the Scholarship of Teaching and Learning

Author: Pat Hutchings
Publisher: The Carnegie Foundation for the Advancement of Teaching
Copyright Year: 2002
ISBN: 0-931050-70-7
Number of pages: 97
Price: $27
Review by: Donna Killian Duffy, PhD, Middlesex Community College, Bedford and Lowell, MA

Since 1998 the Carnegie Foundation for the Advancement of Teaching has been engaged in supporting work in the scholarship of teaching and learning (SoTL). In SoTL projects, faculty members examine a classroom question or practice in deliberate ways and try to provide concrete evidence about student learning. Projects reflect three criteria necessary for scholarship: they are public, susceptible to critical review and evaluation, and accessible for exchange and use by other members of a person’s scholarly community (Shulman, 1999).

In this volume, Pat Hutchings presents seven case studies from Carnegie scholars who are facing a number of ethical dilemmas as they investigate learning in their classrooms. Each case presents a dilemma and is then followed by commentaries from individuals with three different perspectives. Although the cases are from disciplines such as mathematics, computer science, humanities, education, English, and theatre, the dilemmas are typical to all classrooms and raise important questions regarding appropriate practice. As Hutchings states, “what’s at issue in the seven cases are not abstract rules of right and wrong, but dilemmas of fidelity and attempts to balance competing goods—and to do so in a context without clear norms or rules” (p. 8).

In a case entitled “Using Student Work as Evidence,” David Takacs raises issues about obtaining permission to use student work as evidence of learning. Do students really feel free to deny permission? What happens if student work is presented in a negative light? Do students want to have names included, or do they want work quoted as anonymous? Takacs provides concrete examples of consent forms and suggests a number of ways to structure the setting so that students will not feel pressure to participate. He encourages moving from a model of students as subjects to students as collaborators in the learning process.

In case four, M. C. Dowell discusses the issue of balancing pedagogic needs with the needs of a classroom experiment. As part of an NSF grant, M. C. Dowell studied performance when students worked as pairs in a programming class (experimental class) and when they worked individually (control classroom). As the term progressed, there were problems with attendance and completion of reading assignments in the control classroom and M. C. Dowell thought about trying an intervention such as a pop quiz. But, because the class was part of an ongoing study, such an intervention would interfere with the controlled experiment. What to do? H is dilemma reflects the conflict of competing goods. Should he give up experimental rigor or try an intervention that might improve student learning?

The respondents to M. C. Dowell’s case acknowledge the problem and present ideas for gathering data in different ways. The theme of encouraging students to become more reflective of their own learning emerges again. Peter Alexander suggests creating a rubric matrix for students to record the quality of their study time for different activities in the course. For example, students note that on a certain day they spent 90 minutes of study time on writing and then assess the quality of this time as excellent, adequate, or inadequate. The idea of having students rank the quality of their study time helps them to appreciate that the quality of 20 minutes of focused work might be preferable to an hour of study with many distractions. Lack of time is an ongoing student complaint; the use of a rubric to help students assess quality of time on task is a practical way to support more reflection on the process of learning.

The dilemmas presented in Ethics of Inquiry are realistic “snapshots” of classroom practice that encourage readers to reflect on how they would have navigated similar situations. The three commentaries following each case present different interpretations and expand the reader’s appreciation for the complexity of daily choices in a classroom setting. Becoming more aware of the “competing goods” in a classroom can help faculty members as they confront their own ethical dilemmas in the future.
When comparing the variation in snowfall between the North and the South Pole, the relative humidity is essential. Yet when comparing snowfall in a variety of locations in a humid mountainous country near the Equator, humidity is now virtually meaningless in explaining variation. In this case, the temperature differences account for the variation in snow. Now to return to the five true/false statements listed above. You may want to modify your answers based on the discussion above.

The first statement is most definitely false. Consider for example the disease Phenylketonuria (PKU), which has a heritability of 1. This can result in mental retardation, yet the retardation can be prevented if phenylalanine is removed from the person’s diet at birth, and if the person watches their diet very carefully.

The second statement is also false. The heritability of having 5 fingers on each hand is very low, close to zero. This is because the source of the variation here is usually environmentally caused early on because of teratogens, and for adults because of accidents.

The third statement is true. Although it might seem that heritability reflects how inherited a trait is, it doesn’t do this at all. Actually, it is paradoxical. The more inherited a trait is, the less heritable it is! So, if the liberal establishment ever gets schools to be relatively equal in terms of facilities, materials, and instructional staff, then the heritability of students’ achievement would increase. So, although it might seem that inherited events are highly heritable, they are not.

The fourth statement is also true. Things that seem very non-inheritable may have high heritability estimates. Fifty years ago, when virtually only women wore earrings, the heritability of wearing earrings was very high. That is because certain genes were usually found in earring wearers that were not found in non-earring wearers. Since heritability estimates are correlational, they tell us nothing about what causes a behavior. The gene whose presence is correlated with wearing earrings need not play any direct role in causing that behavior.

Statement five is false. As a matter of fact, identical twins have a heritability of zero because any variation in their behavior cannot be accounted for by genetic differences. I know that some identical twins are not genetically identical, but that is another article! See David B. Broman’s book *The X Chromosome Controls Our Lives* for more information on this.

Statement six is true. This is because the environment gets more similar it becomes less a source of variation for the individuals.

Statement seven is true as well. This is because as the heritabilities become more similar, they are less a source of variation for the individuals in the group.

It is always important to remember that the concept of heritability and the issue of modifiability are completely unrelated.

For further references, see:

ACTIVITY: Psychobauble: Creating Psychology-Themed Ornaments as a Creative Review Exercise

Bill Garris, PhD
Cumberland College

Several years ago I visited an art museum that had a special holiday feature: artistically themed Christmas trees. I remember thinking that all the trees looked really impressive, but one tree in particular stood out to me, the Van Gogh tannenbaum. A few years later while attending Iowa State University I witnessed a festival of holiday trees. The development office arranged the decoration and subsequent auction of Christmas trees, which had the additional benefit of being a stunning community event. So a few years ago when we pulled out our dusty departmental Christmas tree and its miserable, second-rate, hand-me-down ornaments I had an idea: psychology Christmas ornaments.

For the past several years students in my basic psychology classes have created psychology-themed ornaments for our departmental Christmas tree. Students are charged with the task of taking a construct, theory, contribution, or person from the field and using creative materials to construct a tangible ornament, and the exercise culminates in the students taking 2 or 3 minutes to present the ornament and explain the psychology behind the ornament to the class. The project is set up in the following way: First, the assignment is communicated to the students through a handout that sets up the need, provides direction, and describes how the students will be evaluated. In setting up the need, the assignment explains that the Psychology Department tree is bare and needs their help. Further, students are advised that this assignment provides (1) a review of people, research, and concepts covered in basic psychology; (2) a speaking opportunity; and (3) a creative, nontraditional opportunity for learning and evaluation.

Second, I try to prime students’ imaginations by making several suggestions of possible ornaments. At the same time I prohibit students from simply turning in to me their version of one of these sample ornaments. They are explicitly described as only springboards for their own ideas. Ideas for their consideration include (1) a wood or soap carving of a hierarchy of needs; (2) an almond amygdala; (3) a nicely done figure-ground image, perhaps laminated; (4) an artistic interpretation of what a “superego” might look like; (5), an accurate mini-model of an eyeball or ear.

Finally toward the end of the semester, students come to the front of the class, display their ornament, and speak for 2 to 3 minutes about its connection to psychology. I quickly evaluate their ornament and presentation for creativity and academic contribution. A simple rubric weights the assignment at about 1.5 percent of the final grade, usually calculated as bonus points.

The students amaze me with their creativity. A cross the years I have collected a half-Santa, half-snowman figurine suffering from dissociative identity disorder, a yellow mapping hazard sign with a fallen bearded stick figure warning of Freudian slips, soldiers maneuvering across a piece of concrete (demonstrating concrete operations), a hunting blind with two windows (a double blind), a doll studying books inside of an eyeglasses case (case study), and a sampler bottle of conditioner inside of a “classical” Faberge egg (classical conditioning). Finally, a somewhat disengaged soccer player created a neuron from Cheetos cereal mix, stuck together with green chewing gum. Never let a lack of art supplies become an excuse.

Across the years this has been a fun and fruitful exercise that involves more tactile and creative aspects of learning. Not only am I surprised with the hidden talents the students display, but they, too, are often amused by the squirting Pavlovian dog ornament and their friends clever play on words. Finally, this fun end of the year exercise gives students a chance to informally teach their peers about some aspect of basic psychology. And we all know that “that which we teach, we learn best,” a particularly useful truism with December finals looming.
Dear Doctor

Do we use only 10% of our brain?

It's best to start an answer to this question by defining terms.

Few people would dispute that our brains have the potential to learn new information and add new memories throughout our lives. However, most people who believe that we use only a small portion of the brain suggest that there are parts of the brain that have no function. They contend that if we somehow were able to recruit these lower brain areas then we would have higher intelligence, incredible memories, and other fantastic mental abilities. Perhaps, we would even have supernatural abilities such as telekinesis. I do not know of any scientific data that support any of these claims.

Somewhere, somehow, someone started the myth that we use only a small fraction of our brain, and the popular media have perpetuated the myth. The "10% of the brain" statement appears in advertisements to sell products, implying that a particular machine or invention will activate unused parts of the brain. Soon, the myth, without any scientific fact, becomes "truth."

The statement, "We use only 10% of our brains" is false; it's a myth. We use all of our brain. What are the possible origins of this myth and what is the evidence that we use all of our brain?

The 10% statement may have been started when someone misquoted Albert Einstein or with the misinterpretation of the work of Pierre Flourens in the 1800s. It may have been William James who wrote in 1908: "We are making use of only a small part of our possible mental and physical resources" (from The Principles of Psychology). Perhaps the myth has its origins in the work of Karl Lashley. In the 1920s and 1930s, Lashley removed large areas of the cerebral cortex in rats and found that these animals could still relearn several tasks. We now know that destruction of even small areas of the human brain can have devastating effects on behavior. That is one reason why neurosurgeons must carefully map the brain before removing brain tissue during operations for epilepsy or brain tumors. They want to make sure that essential areas of the brain are not damaged.

What does it mean to use 10% of one's brain? Does it mean that you would be just fine if 90% of your brain was removed? If the average human brain weighs 1,400 grams (about 3 lb) and 90% of it was removed, that would leave 140 grams (about 0.3 lb) of brain tissue. That's about the size of a sheep's brain. It is well known that damage to a relatively small area of the brain, such as that caused by a stroke, may cause devastating disabilities. Certain neurological disorders, such as Parkinson's disease, also affect only specific areas of the brain. The amount of tissue damaged by these conditions is far less than 90% of the brain.

The human brain contains approximately 100 billion nerve cells (neurons). Perhaps when people use the 10% brain statement, they mean that only one out of every 10 nerve cells is essential or used at any one time? How would such a measurement be made? Even if neurons are not firing action potentials, they may still be receiving signals from other neurons. In addition to neurons, the brain contains glial cells. In fact, glial cells outnumber neurons by at least 10 to 1. Glial cells are essential for the brain to function properly. For example, glial cells provide physical and nutritional support for neurons, digest parts of dead neurons, and insulate neurons with myelin. Glial cells may also modulate how neurons communicate with one another.

Althought the brain is only about 2% of a human's total body weight, it receives about 20% of the body's blood supply. It is unlikely that such a large quantity of the nutrients would be sent to tissue that is largely unused.

The brain does contain several pathways that serve similar functions. For example, there are several pathways in the central nervous system that are used for vision. This concept is called "redundancy" and is found throughout the nervous system. Multiple pathways for the same function may be a type of "safety mechanism" should one of the pathways fail. Still, functional brain imaging studies show that all parts of the brain function. Even during sleep, the brain is active. The brain is still being "used." It is just in a different active state.

Finally, the saying "Use it or lose it" seems to apply to the nervous system. During development, many new synapses are formed. In fact, some synapses are eliminated later on in development. This period of synaptic development and elimination goes on to "fine tune" the wiring of the nervous system. Many studies have shown that if the input to a particular neural system is eliminated, then neurons in this system will not function properly. This has been shown quite dramatically in the visual system: Complete loss of vision will occur if visual information is prevented from stimulating the eyes (and brain) early in development. It seems reasonable to suggest that if 90% of the brain was not used, then many neural pathways would degenerate. However, this does not seem to be the case. On the other hand, the brains of young children are quite adaptable. There are examples of functional recovery in young children who have had large portions of their brains removed to control epileptic seizures. Such miraculous recovery after extensive brain surgery is unusual in adults. Recovery from such brain injuries occurs when the brain "rewires" itself. In other words, the functions of a damaged brain area are taken over by remaining brain tissue.

This piece was adapted from the "Neuroscience for Kids" Web site at http://faculty.washington.edu/chudler/tenper.html.

Dear Doctor, continued on page 23
Dear Doctor, continued from page 22

For a continuing discussion of this topic, please see:

1. Ten Percent and Counting: http://www.brainconnection.com/topics/brainfarbrain-myth/
2. 90% of a Brain is A Terrible Thing to Waste: http://www.theness.com/article/brain-neq0201.htm/
4. The Ten Percent Myth: http://www.theness.com/science/stats/10percent.htm/
5. B. L. Boyerstein. (1999). Whence cometh the myth that we only use 10% of our brains? In S. Della Sala, M ind myths: Exploring popular assumptions about the mind and brain (pp. 3-24). Chichester, UK: John Wiley & Sons.

This answer was provided Eric H. Chudler, PhD, of the University of Washington. Dr. Chudler is a Research Associate Professor in the Department of Anesthesiology and maintains the Neuroscience kids Web site (http://faculty.washington.edu/chudler/neurok.html).

Questions submitted to this column by teachers and students will be answered by experts in the field of psychology. Please send your questions to Dr. Doctor/PTN, Education Directorate, 750 First Street, NE, Washington, DC 20002-4242.

The Ethnic Minority Recruitment Project

Debra Park
West Deptford High School

The Ethnic Minority Recruitment Project was first proposed in 2004 to expose minority high school students to career options in psychology and to encourage and motivate these students to consider pursuing psychology as a career. The project aims to introduce ethnic minority students to successful minority students and professionals who can serve as role models and mentors.

To actively contribute toward a goal set by APA to increase the numbers of ethnic minority psychologists as a way of better meeting the needs of a more diverse population, T O P S S and PT @C C, in collaboration with the APA Membership Department, began a series of pilot programs to recruit more ethnic minority students into psychology. In addition, what better way to begin increasing the numbers of ethnic minority models who can serve as role models to ethical minority students in high schools to motivate them to consider careers in psychology?

The project model was based on organizing educational sessions for high school students that could be presented through the collaborative work of local high school teachers, community college and 4-year college professors and students, graduate students, and local psychologists.

A series of career-oriented pilot programs have been developed and implemented. These programs have been open to all students, but the aim was to attract an ethnic minority audience. A major premise was that using ethnic minority models and centering discussion on topics of interest to ethnic minority students would have a significant impact on their college and career interests.

The pilot programs to date have addressed the specific interests of the schools and students involved. The first meeting, at most schools, started with a presentation by an ethnic student(s) from a local community college/4-year college/graduate program. The presentations included a psychology careers video and a discussion on why psychology is a potential career to consider. Discussions covered what psychology offers relevant to ethnic communities, possible issues raised by parental expectations, and examples of ethnic psychologists who have attained visibility in the field. Materials from the APA Education Directorate, the APA Office on Ethnic Minority Affairs, and other sources showing ethnic minorities in psychology careers have been distributed.

The ethnic minority students who presented as role models were either from a community college or a 4-year college within the same geographic area as the high school(s). Some students became involved through the help of Psi Beta or Psi Chi. Graduates from the high schools were also involved, as well as professors from local community colleges and universities and other local psychologists who served as guest speakers.

More information on the pilot projects held to date is posted on the T O P S S Web site (http://www.apa.org/ed/tops/phomepage.html), along with pictures and resources that can be used with the students. We encourage all teachers and communities to consider participating in this exciting program. This program runs on a grassroots basis, and we hope teachers might have contacts in their communities to facilitate meetings between high schools, community colleges, 4-year colleges, and professionals in the community. The T O P S S Speakers Bureau can help teachers find local professionals. If you have any questions about how to implement this project, please contact Debra Park at debbypark@aol.com or Richard M. Suinn, PhD at suinn@lamar.colostate.edu. We thank you for your participation!

Drs. David Libby (far right) from left) presented to Kelly Galasso (far left) and students at El Toro High School (Lake Forest, California) April 6, 2005.