



## The Legacy of Anne Anastasi: 1908-2001

*The 2002 Division One program at the American Psychological Association meeting in Chicago features a symposium saluting Anne Anastasi, organized by Harold Takooshian to focus on her personal impacts on people. Excerpts from this symposium, one of two on the program to honor Anne, are presented here. Each presenter discusses one of the many facets of Anastasi's influence. See affiliations of presenters at the end of this piece.*

A psychologist for all seasons and a past President of APA Division One, Anne Anastasi (1908-2001) passed away on May 4, 2001 at age 92. By all measures, she had a unique career in psychology. Its 70 years not only spanned over half the history of scientific psychology — starting with her PhD at age 21 in 1930 — but it was remarkable in other ways.

(1) Diversity: She excelled as a scientist, author, editor, administrator, teacher — President of the Eastern and American Psychological Associations, Department Chair and Professor at Fordham, an architect of test development in the USA, a recipient of the National Medal of Science (from President Reagan in 1987), author of 150 publications. (2) Overlooked Work. Though she was so widely renowned for the seven editions of her authoritative textbook on *Psychological Testing* (1954-1996), her other landmark contributions are typically overlooked—three editions of *Differential Psychology* (1937-1958), and *Fields of Applied Psychology* (1964). (3) Personal Qualities. Though her work was known by thousands of students and colleagues worldwide over many decades, her colorful personal qualities remain little known to all except those students and colleagues who knew her personally, and each seems to have distinct memories to share about her or her impact on their lives. (**Harold Takooshian**)

### Anne as Scientist — John D. Hogan

Several of Anastasi's ideas about psychological science can be found in her Presidential Address, titled "The Cultivation of Diversity," given at the 80th Annual Meeting of the American Psychological Association (1972). In it, she stressed the importance of remaining objective, and of not confusing personal beliefs with science. This theme appears repeatedly in her work. She challenged psychologists to remain humble in pursuing and interpreting

their research, and to recognize the contributions of other disciplines.

Her criticism included those who were trying to promote the idea that psychology could influence international understanding and end wars. She believed that such individuals were simply announcing their political preferences under the guise of psychology and, although they were well-meaning, they were essentially dishonest. She was adamant in her belief that psychologists should offer solutions to social problems only when there was adequate research evidence to support their recommendations.

She was an active researcher and her interests covered a wide range of topics. One of her early research emphases was on the development and measurement of traits, particularly the role of experience in trait development and measurement. By 1936, only six years after receiving her doctorate, she was engaged in a debate with the distinguished psychologist and psychometrician, L. L. Thurstone, on the subject of traits. This was a remarkable exchange considering the differences in their age and experience — Anastasi was in her late twenties and an unknown instructor; Thurstone was almost fifty and was already a giant in the field.

Her textbook, *Psychological Testing* played the greatest role in maintaining her reputation. It is, practically speaking, an encyclopedia of psychological testing. In it, she covered the full range of information necessary for a sophisticated and contemporary approach to the subject. It included information about the history, nature, and use of psychological tests; ethical considerations; relevant statistical concepts including norms, reliability, validity, and item analysis; and descriptions of a broad band of instruments from the Stanford-Binet to the TAT.

For Anastasi, there was nothing mysterious about psychological tests. They were simply tools, and their effectiveness depended on the skill and integrity of the examiner. She never grew blasé about accurate measurement and was always cautious about errors that might go unnoticed. She believed basic research was still needed on larger issues such as the generality of psychologi-

cal constructs derived within a single culture. She maintained there was a common core to psychology and that core was the scientific explanation for human behavior. Moreover, she argued there were many unifying principles in psychology if we cared to look for them.

#### **Anne as Role model — Agnes N. O'Connell**

Anne Anastasi was clearly a brilliant scientist, scholar, author, teacher, and an extraordinary role model of achievement. In examining her life for her autobiography in *Models of Achievement: Reflections of Eminent Women in Psychology, Volume 2* (Anastasi in O'Connell & Russo, 1988), Anastasi identified chance and a strong internal locus of control as major themes in her personal and professional life. She wrote of being offered a position as instructor at Barnard College when she was crossing the street and met her professor, Harry Hollingworth, Chair of the Psychology Department, in the pedestrian safety zone. What she modestly does not say about this chance encounter is that her academic record, knowledge, and skills were truly impressive. A product of home and public schooling, she had entered Barnard College at 15, earned her bachelor's degree at 19, and her doctorate from Columbia at 21 years (1930).

Her perspective on life and career illuminated an interaction between chance and locus of control where even negative chance events were resourcefully turned into outstanding positives. At age 26, one year after her marriage to psychologist John Porter Foley, Jr. (1910-1994), they learned she had cervical cancer, and the radium treatment left her reproductively sterile. Her reaction was courageous acceptance of the loss and choosing to focus on it as a resolution of possible family v career conflict. She wrote, "response to misfortune can vary from self-pity, depression, and even suicide to enhanced motivation and a determination to show the world that it can't keep you down" (Anastasi, 1988, p. 63).

A unifying and guiding goal in Anastasi's lifelong personal and professional development was a desire to understand the world around her; to use tough-minded rational procedures; to debunk weak, sloppy generalizations; to fight charlatanism; and to correct misconceptions. Within that framework, her scholarship contains major themes on the interaction of factors in psychological development; individual differences; psychological traits; the construction, interpretation, and evaluation of tests; and the relationships between art and abnormality. Her books and internationally known classics available in nine languages.

She received the National Medal of Science in 1987, and many honors and awards in psychology for being "a major force in the development of differential psychology," for "unusual critical acumen in her timely undercutting of spurious issues" (*American Psychologist*, 1982, p. 52), and "for excellence ... major conceptual contributions to our understanding ... [and] the development of psychology as a quantitative behavioral science" (*American Psychologist*, 1985, p. 340).

She was the first woman in more than fifty years (1921-1971) and the third woman (Calkins, 1905; Washburn, 1921) in eighty years to serve as President of the American Psychological Association despite the significant percentage of women psychologists in the Association since its inception in 1892. It was Anne Anastasi who made the five decade breakthrough (O'Connell, 2001).

My students at Montclair State University read of her life as an only child whose father died when she was one year old, of her atypical family, her hardships, her unusual scholarship, her prolific professional contributions, and her accomplishments with great interest (Anastasi, 1988). Her excellence encompasses it all. They like her attitude, her task-oriented rather than self-oriented approach, her focus on the subject matter, and that she was not seeking awards and honors but doing the work she enjoyed most. They are impressed by the psychological framework that she used to present her own life story, and that she overcame resistance to women in the field to achieve and contribute so significantly. They find her an inspiration in many ways but especially in being persistent in the pursuit of their own goals.

#### **Anne as APA leader — Edwin P. Hollander**

Anne and I were associated in both the Eastern Psychological Association (EPA) and the APA. She had been a vital force in the former where she displayed a wonderful enthusiasm and commitment that stood her in good stead when she became the APA President. We were associated earlier on the APA Council where she showed great organizational understanding and a capacity to speak her mind regarding issues in a direct and forceful manner, but very often with an engaging smile.

I knew of course of the considerable scholarly work, and her successful texts, which I and countless others used with great benefit. However, when we were together with other colleagues and my wife Pat on the Columbia campus for the hundredth anniversary of the psychology department, I was struck by the sheer joy that she evidenced as

we walked with the group across the campus. It was as if she had been restored to the time when she, at a much earlier time, and I, at a somewhat later one, were both graduate students on that very appealing campus. That is one of my lasting memories of her, which I will cherish always.

#### **Anne as Coauthor— Susana P. Urbina**

All of us students had vivid memories of her as a teacher. Dr. Anastasi was rigorous but extremely generous with her time and with her forthright and thoughtful critiques of her students' work. Her comments could be acerbic but they inevitably led those of us whom she mentored to reach for the highest possible standards. This also instilled confidence in us. If Anne Anastasi was satisfied with one's work, one knew the result was worthwhile. Dr. Anastasi taught psychology courses for almost 50 years, from 1930 when she started as an instructor at Barnard College until 1979 when she retired from Fordham University. She continued to teach those of us who were fortunate enough to be around her for a long time after that.

#### **Anne as Cross-culturist — Harold Takooshian**

Anne Anastasi was not only a cross-culturist way ahead of her time, but as early as 1937 her integrated model for cross-cultural psychology actually surpasses the Procrustean models we are evolving today. With characteristic clarity, precision, thoroughness, her 1937 tome defined "differential psychology" as the scientific study of group differences, then went on to offer a succession of research-based chapters on group differences based on age, family, anatomy, gender, race, ethnicity, SES. Talk about diversity! And this in 1937, decades before the Civil Rights Act of 1964, feminism of the 1970s, cross-culturalism of the 1980s, and the new APA international division in 1997.

Far more than other psychometricians, Anne consistently emphasized the limitations of psychological tests, their environmental and cultural contexts, and the value of qualitative information. At precisely the time when Nazi and Continental researchers were vigorously developing a race science to emphasize group differences based on genetic factors, Anne's 894-page tome casually dismissed such efforts in a few crisp words: "The array of evidence in support of this [Aryan supremacy] is incomplete and one-sided at its best and fantastic and mythical at its worst" (Anastasi & Foley, 1949, p. 690). It is unfortunate that the stigma about studying group differences following the Nazi era seemed to oblige her to segue from this to the less controversial and more

utilitarian topic of individual difference—with the debut of her text *Psychological Testing* in 1954. This prescient cultural sensitivity seemed to originate from her early influences at Columbia, with Otto Klineberg and (through her husband John) Franz Boas.

Anne later became a cross-culturist in another, if less intentional way — her international reputation. Few U.S. psychologists were so widely known outside the USA, where her tomes were translated into even the most unlikely languages, like Russian and Persian (where she was told the translator was reportedly executed afterwards). For decades Anne was a gracious host, as a steady stream of international dignitaries passing through New York City would make their pilgrimage to her Bronx office to speak with Dr. Anastasi in person. For many, Anne epitomized scientific psychology in the USA, and her work on testing set a standard respected and followed by psychologists worldwide.

When I checked out one of the many copies of Anne's *Differential Psychology* from our own Fordham library, the clerk had to install a bar code into the volume, indicating it had not been checked out once in over 20 years. Those of us today interested in diversity can do no better than resurrect and peruse the clear-eyed but near-forgotten wisdom enunciated by this brilliant scientist a half century ago.

#### **Anne as Colleague — Olivia J. Hooker**

No one who had the privilege of working with Dr. Anne Anastasi was ever bored. Her diverse interests and firm convictions defied easy prediction.

After completing my clinical psychology doctorate at Rochester in 1962, I spent many years teaching at Fordham as a colleague of Anne. Many of our contacts were informal, as our offices at Fordham's Graduate School of Arts and Sciences were side by side. We all admired her planning expertise. Yet she had grave difficulty finding her way in those vast convention halls which the APA used in the last few decades. Especially at the Practice Directorate early in the conventions, we often pondered over maps together, trying to locate Hall A or Meeting Room B.

In teaching or mentoring, Anne had few peers. Every student was made to feel as if his/her career was of primary concern. Whenever a candidate needed an emergency meeting, she made time, even if it meant having the student appear in the sanctity of her Manhattan home at 10 pm. When I invited Anne to speak to my students in "Issues in

clinical services for ethnic minorities," the students were enchanted. Her willingness to answer questions about her own activities in publishing, in presenting research at conferences, or participating in panels at national meetings widened their horizons.

Enjoyment of departmental meetings and gatherings never waned for Anne Anastasi. Unlike those of us who dropped by in the "costume of the day," she always dressed for parties, giving infinite care to her appearance. There is no doubt that owning a car who have simplified commuting. She traveled by railroad after memorizing each schedule change. Anne had deeply-held positions on controversial issues debated by APA Council. She showed very special interest in minority colleagues, in students, and women professionals. Here deep sense of justice persuaded the College administration to become more inclusive and more flexible.

### **Anne as Friend — Jonathan Galente**

Anyone who knew Anne for as long as I did could easily reminisce about her for days — she and her husband John were such colorful people. My father Richard Galente met Anne after she moved from Queens in 1947 to Fordham's Psychology Department, where he was the department's instrument maker for many years before I took that position on his retirement. So I knew Anne all my life as a close family friend and, in a real sense, we became virtual family members sharing decades of holidays and fellowship in our homes. Even as a child I routinely spent long days working with my dad on East 38 Street, to maintain the stately six-story townhouse where Anne and John lived, as well as Anne's mother Theresa for a time. Anne's official retirement from full-time teaching in 1979 did not diminish our contacts at all, since by that time we were already like kin.

Some things I can say about Anne and John, each with their distinct yet symbiotic ways. I would describe Anne as gracious, amusing, opinionated, frugal, hard-working, dedicated to scientific psychology, totally unpredictable in some ways and highly predictable in others. Each day from 5 to 6 pm, she would have one martini and one cigarette to unwind, and was a master at telling remarkable stories. She was fiercely autonomous, and even in a hospital bed at Jacoby would reprove her physicians if they treated her less than respectfully, as hospital staff can do. Though she and John were frugal by nature, she gave one new Fordham professor a gift of \$10,000 to ease his family's relocation to New York. Anne was always well-groomed even

into her nineties, careful about her appearance; even during her funeral at age 92 her face was blessed with a fair, wrinkle-free skin that would be the envy of women in their twenties. She was fussy about photos, and would sit with me to personally destroy the negative for the great majority of photos she disliked; fortunately we both liked that one photo I took of her smiling with a cigarette, which I reprinted for her memorial. Anne was deeply committed to gender and racial equality, which showed throughout her writing and teaching. Anne was not at all a person of faith, though she spent many hours sitting alone in quiet contemplation in the Catholic Church across the street from her Manhattan home. Like my dad I was always there for my dear friend, including her later years when Anne also had home nurses beside her. Throughout the half century I knew her, I can say that all who knew Anne recognized her as truly one of a kind.

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Photo/Jonathan Galente

**Dr. Anne Anastasi**



# General Business

## PORTRAITS OF PIONEERS IN PSYCHOLOGY- Volume V

Editors: Gregory A. Kimble and Michael Wertheimer

Published jointly by APA and Erlbaum for  
The Society for General Psychology

The book is well along in production. All of the chapters have been technically edited at Erlbaum and sent to the authors for their approval. Most of these chapters have been returned to the publisher. The volume is scheduled to appear late this year with a 2003 copyright date. It will not be published in time to adopt for Fall classes but proof should be available for examination at the APA Convention.

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- ## Call for Fellow Nominations

Members of APA Division One, The Society for General Psychology, are now invited to nominate others (or themselves) for election as a fellow of the Society, based on their "unusual and outstanding contributions" to general psychology. Phone or write soon for a packet of forms for APA, and our Society's 12 criteria. This year all completed materials must be submitted by 5 pm Friday, 13 December 2002— including the nominee's vita, personal statement, and endorsements from 3 current APA fellows. At least 2 of the 3 endorsers must be a fellow of Division 1. (Those who are already a fellow of another APA division can ask about a streamlined nomination procedure.) — Harold Takooshian, SGP Fellows, 314 Dartmouth, Paramus NJ 07652, USA. Phone 212-636-6393.

## Election Results

The results of elections for offices in divisions are now available. In Division One, 405 members voted—or a few more if some voted for Council Rep or at-large member of the Executive Committee and didn't vote for President -Elect. The results are as follows: President-Elect - Peter Salovey; Representative to APA Council - Michael Wertheimer; Member-At- Large of the Executive Committee - Wayne Camara

***The Society is for those psychologists who take a broad perspective, who try to relate specializations to a greater enterprise.***

Division One's historically important position as the first Division of APA reflects the organizing members' goal that there should be an internal organization devoted to the total body of psychological knowledge. Special interest divisions would certainly emerge, but Division One would be in place to work against the centrifugal stresses that specialization would impose on APA.

**General Psychology** implies a recognition that all subfields and specialties within Psychology, along with other disciplines, contribute pieces to a coherent understanding of the "Big Picture." There can be a gradual approach to coherent understanding of human nature and its relationship to society and the environment. However, there must be a continual redrawing of the "Big Picture" because it will not redraw itself. Such redrawing is the substantive concern of Division One.

### The Society for General Psychology

#### Division One, American Psychological Association

To become active in Division One, please determine the category that best describes your intended relationship with the Division and submit the needed information and fees, if any, to the APA Division Services Department at the address below.

If you are a member (**Mem**) of APA (Fellow, Member, or Associate), there are no dues required at this time. APA will apply any dues and assessments on your next Dues Statement (currently \$20 which includes \$12.50 for *Review of General Psychology*).

Applicants in the following categories will be assessed dues of \$7.50 at the next dues mailing by APA: APA Affiliate (**Aff**)-- (International, High School, or Student): Students (**Stu**) who are not Student Affiliates of APA; Individual Affiliate (**Ind**)-- interested individual who do not qualify for one of the above categories. All affiliates may choose to receive the **Review of General Psychology** for \$12.50.

Members and affiliates who wish to receive issues of the **Review of General Psychology** for the current year should submit a check for \$12.50 with this application form and check here:

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Membership Category (Circle): **Mem Aff Stu Ind**

**Make checks payable to APA, Division One**

Send completed form and fees to:

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American Psychological Association  
750 First Street, NE  
Washington, DC 20002**

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**Division 47: Sport and Exercise Psychology  
Presents**

**The 24<sup>th</sup> Annual Running Psychologists'  
APA 5K Race and Walk  
Saturday, August 24, 2002**

The annual race and walk for the 2002 Chicago Convention of APA will be held on **Saturday** morning, August 24th, at 7AM. The start/finish area will be by the lakeshore in the Grant Park area, a short walk from the hotels and convention center. The out and back run will parallel Lake Michigan and turn back near the Shedd Aquarium.

Trophies will be awarded to the overall men and women's winners and to the top three in each 5-year age group, from under 25 to over 74. The top three male and female finishers who are Division 47 members will receive awards. The top three finishers who are current Psi Chi members also will receive awards, as well as the top three current or past Psi Chi National Council members. To honor our sponsors who make the race possible and the exhibitors at our meeting who provide the excellent raffle prizes, the highest finishing male and female sponsor and exhibitor will receive awards.

Pre-registration will run until August 16th - which means that the entry form and fee must be received by that date. Please give us all the requested information including age and gender so that the race numbers can be labeled appropriately and save us time in determining your category for the results. **THE ENTRY FEE FOR PRE-REGISTERED RUNNERS IS \$20.00**, which includes a commemorative shirt, raffle chance, and post-race refreshments. **PAST AUGUST 16<sup>TH</sup>, CONVENTION AND DAY-OF-RACE REGISTRATION FEE IS \$25.00**. Pre-registration for students is \$10.00 and convention/day-of-race student registration is \$14.00. **PLEASE** pre-register to help us avoid too many convention and day-of-race registrations. Make your check payable to: **Running Psychologists**.

Division 47 members receive a discounted race entry of \$10 as a value-added benefit of division membership. If you are an APA member and wish to apply for division membership with this entry form, check the block on the form below and remit the discounted entry fee (\$10) plus the Division dues (\$22 for members, \$8 for student affiliates). We will forward your application to APA for processing.

The 5th Annual Pre-Race Pasta Dinner will be held on **Friday** evening, August 23<sup>rd</sup>, at 6:00 - 8:00 PM at Gioco's Restaurant, near McCormick Place. Please mark your entry form to reserve a place at the party. You may prepay when you pick up your race materials at the convention. Restaurant name and directions will be available at that time.

You may pick up your race number, shirt, and raffle ticket at the business meeting of Running Psychologists on Friday morning at 8AM (see the program for room number) or at the APA Division Services booth in the McCormick Place Convention Center, beginning Friday morning.

**Sponsored by: APA Insurance Trust - Psi Chi -  
American Psychological Association - Division 47**

**2002: A Race for  
Renewal - The 24<sup>th</sup>  
Annual APA Rat Race  
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I assume all risks associated with running in this event including, but not limited to: falls, contact with other participants, the effects of the weather, including high heat and/or humidity, traffic and the conditions of the road, all such risks being known and appreciated by me. Having read this waiver and knowing these facts and in consideration of you accepting my entry, I, for myself and anyone entitled to act on my behalf, waive and release the Running Psychologists, Division 47 and the American Psychological Association, the City of Chicago, their representatives and successors from all claims or liabilities of any kind arising out of my participation in this event even though that liability may arise out of negligence or carelessness on the part of the persons named in this waiver. I grant permission to all of the foregoing to use any photographs, motion pictures, and recording, or any other record of this event for any legitimate purpose. I HAVE READ THE ABOVE RELEASE AND UNDERSTAND THAT I AM ENTERING THIS EVENT AT MY OWN RISK.

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Receipt before Aug. 16th: \$20

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On-site: \$25/\$14

**Div 47 Members only: \$10**



## BEHAVIOR DEVELOPS, MINDS DON'T SNAP

Lewis P. Lipsitt  
Brown University

*(I wrote this piece before a police officer in Dover Township, NJ went on a rampage on April 10 and killed five citizens of his community, then shot his police chief, and finally killed himself. This was just weeks after a Newark police sergeant shot four people, including his granddaughter. The study and prevention of such behavior and its development presents an urgent and potentially very productive area of concentrated concern for virtually all domains of psychology as a science. A unified attack on such issues, including other kinds of behavioral misadventure, could and should bring together the collective expertise of child developmentalists, epidemiological psychologists, behavioral geneticists, clinical psychologists, historians, organizational and industrial psychologists, social psychologists, personality researchers, and others. A "Manhattan Project" of human assaultive behavior is called for, in all of its manifestations from domestic violence to neighbor-killing, to bullying, to false accusation, to warfare.)*

The recent convictions of two Vermont teenagers for the brutal slaying of two Dartmouth professors make us wonder how two ostensibly "normal kids," one of them an honors student, could engage in such behavior without giving major signals of their grossly anti-social dispositions.

Similarly, when an adolescent pilot deliberately flew a stolen plane into a Tampa office building, friends and neighbors said "His mind must have snapped," and that he must have had a "nervous breakdown." Other attempts at feeble explanation included this caption: "Accutane, prescribed to the Florida teen who crashed a plane, has been in use (for acne) since 1982, and researchers still don't know if it causes suicides."

Baffled reactions also occurred during the investigation of Andrea Yates, who systematically drowned her five children. Teachers and neighbors insisted she was an "essentially normal" person who must have gone out of her mind; else how could a *mother* be so *cruel*? The intensity of the violence was incomprehensible. The images

we conjured, of the children in terror-stricken face-to-face confrontations with their mother and each other during the killings, were horrifying.

When someone behaves in a way that violates our expectations, our thinking goes dichotic. Yesterday she was okay; today she's not — normal people and abnormal people, sick folks and well folks.

But the human psyche is not like that. Minds don't snap, and nerves don't break down all of a sudden. Figures of speech, often invoked when the behavior of an individual appears to be "out of character," do not explain anything.

When tragic, unbelievable behavior seems to emerge from nowhere, it is inevitably preceded by a process underway for years. Many natural phenomena are like this as when, after several decades, a progressive erosion in a Dutch dike ends in a flood. Even spontaneous combustion has causes, and must be understood as a natural process, not as a catastrophic incident without antecedents.

Humans, too, have histories. We can learn how those experiences work to erode an individual's stability, and become sensitive to imminent disasters. This is the only way to intervene and prevent them. If we go on believing that "crazy behaviors" are happenstances, we will never get to their roots and be able to engage in humane, preventative reconstruction.

In behavioral catastrophes, we tend to medicalize - to look for an organic origin rather than causes based in experience. We also tend to presume, erroneously, that human behavior is essentially unpredictable.

Sigmund Freud dealt with these problems a century ago. People, he said, often *appear* to have a disease when in fact the disorder stems from a learning experience. He insisted, also, that there are no behavioral "accidents," because *all behavior is caused!*

The notion that behavior is lawful and that learning processes are the roots of much of it is thought by many to have originated with the behaviorist professor B.F. Skinner because he, like Freud,

insisted on the critical role that experience plays in behavior. Skinner did demonstrate strikingly that the developmental destinies of animals and humans are determined greatly by their environments and experiences. But it is central to both Freud and the behaviorists that pleasure and annoyance, and the contexts in which they occur, are the foundations of the often startling power of cumulative experience.

Neither Freud nor Skinner denied the importance of the nervous system. Freud, originally a neurologist, understood that all experiences, and remembrances of things past, and the consequences of those memories, are carried by the nervous system.

Scientists today are confident that behavioral events, like all natural phenomena, can be understood in cause-effect and developmental terms. Behavior is lawful. Nonetheless, sometimes the behavior of an acquaintance is so contrary to expectation that we fail to predict it, and experts can hardly explain it.

Just as natural laws form the basis of the sciences of physics and chemistry, laws describing and explaining the regularities of human behavior also exist. If it were not so, we would find the behavior of our friends weird at best, because they would not be at all predictable one moment to the next. The laws of learning and behavior are always in effect, like Newton's laws of gravity and Ohm's law of electrical circuitry. Our knowledge of them and their implications are incomplete, and await further discoveries, but that is so in all sciences.

Only in the last hundred years has humankind found its way with gravity, and put thousand-ton vehicles in the air. So we shouldn't blame our failure to anticipate tragic behavioral events on the inevitability of "accidents," but rather on the incompleteness of our information.

We would all welcome scientific advances in the detection of incipient offenders and potentially dangerous events in our midst. The opportunity was missed, unfortunately, to stop the lad who flew the plane into the Tampa building in obvious imitation of the World Trade Center terrorists. But we must accept that, *in principle*, predicting and controlling the heinous behavior of dangerous individuals is possible. This requires a leap of faith for some, but for many behavioral psychologists and neuroscientists it is no longer such a wild dream.

The nervous system does not come ready-made with angry, hurtful, despicable impulses. Humans do come equipped with strong defensive reflexes, biologically useful in saving one's life when threatened. If treated badly, even babies fight back. From infancy onward, the overarching importance of two major response systems is evident: the capacity to become attached to significant, trusted individuals in our early lives as the essence of enduringly positive, loving relationships with others, and second, the readiness to defend ourselves against hurt. From these basics, humans learn very complex, even artful response patterns that help later to defend us against psychological pain, like humiliation, sadness, and personal grievances.

The science of human development is still immature, because of years of neglect. But this much we know: Children who are born into the hands of someone who loves them unconditionally from the start, and into a welcoming society that affirms the selfhood of individuals, usually become comfortably attached to significant others, and manage to defend their personhood without doing grave damage to others. They don't surprise us later by brutalizing people they don't know, or angrily killing their own children, or ramming a plane into a populated building.

**Lewis P. Lipsitt, Professor Emeritus of Psychology, Medical Science, and Human Development at Brown University, was the founding editor of the *Brown University Child and Adolescent Behavior Letter*, and has been a Brown faculty member since 1957.**

APA DIVISION 1  
**SOCIETY OF GENERAL PSYCHOLOGY**

2002 PROGRAM

**Thursday, August 22, 2002 (8 AM to 11 AM)**

8:00 AM – 10:50 AM (Hilton Chicago and Towers-  
Fourth Floor, Conference Rm 4D)

Div 1 Executive Committee meeting

11 AM – 1 PM APA Opening Session  
1 PM – 6 PM Topical Track Programming/APA  
Board/Committee Programs/APA Awards Addresses  
3 PM – 4 PM APA Presidential Address  
7 PM – 8 PM APA Alumni Night Social Hour

**Friday, August 23, 2002 (8 AM – 3 PM)**

8:00 AM – 8:50 AM (Hyatt Regency McCormick Place  
Hotel-Third Floor, Hospitality Suite 4)

Div 1: *New Fellows Conversation Hour (Coffee)*

9:00 AM – 9:50 AM (McCormick Place, Lakeside  
Center-Level 2, Meeting Rm E253a)

Div 1: Marvin Goldfried. *Arthur W. Staats Lecture  
for Unifying Psychology.*

“Integrative Themes in Clinical Psychology”

*Chair:* Arthur W. Staats

*Co-list:* 7, 12, 25, 28

10:00 AM – 11:50 AM (McCormick Place, Lakeside  
Center-Level 2, Meeting Rm E265)

Div 1: *2 hr Symposium.* “Twenty-Fourth Annual  
Symposium on Eminent Women in Psychology:  
Historical and Personal Perspectives”

*Chair:* Agnes N. O’Connell

*Participants:*

Nancy E. Cantor

Rochel Gelman

Florence W. Kaslow

Jean Lau Chin

*Discussant:* Agnes N. O’Connell

*Co-list:* 7, 12, 15, 26, 28, 35, 42

12:00 PM – 12:50 PM (McCormick Place, North  
Building-Level 2, Meeting Rm N227a)

“September 11, Public Events and Psychology: A Town Hall  
Meeting”

*Chair:* Frank Farley

The idea is to reserve this time to discuss current events and how  
we see them from our various vantage points in psychology.  
Attendees can pick up a lunch (there will be lunch facilities at the  
Convention Center) and bring it to the discussion,

*Co-list:* 7, 8, 14, 18, 47

1:00 PM – 2:50 PM (McCormick Place, Lakeside  
Center-Level 2, Meeting Rm E258)

Div 1: *2 hr Symposium.* “Intelligence, IQ, and g: Lessons  
from Kuhn and Plate Tectonics; Ethical Implications”

*Chair:* W.J. McKeachie

*Participants:*

Thomas C. Cadwallader. “Intelligence, IQ, and g:  
Lessons from Kuhn and Plate Tectonics”

Douglas J. Herrmann. “Ethical Implications”

*Discussants:*

Frank Farley

Earl Hunt

*Co-list:* 7, 10, 15

3 PM – 5 PM APA Plenary Sessions/  
Master Lectures/G. Stanley Hall Lectures  
5 PM – 7 PM APA/APF Awards Presentation

**Saturday, Aug. 24, 2002 (1:00 PM – 3 PM)**

8 AM – 1 PM Topical Track Programming/APA  
Board/Committee Programs/APA Awards  
Addresses

1:00 PM – 1:50 PM (McCormick Place, South  
Building-Level 5, Meeting Rm S501a)

Div 1: Jacob Feldman. *George Miller Award  
Address.*

“Simplicity and Complexity in Human Concept  
Learning”

*Chair:* Lyle E. Bourne, Jr.

*Co-list:* 2, 7, 15, 25, 40

2:00 PM – 2:50 PM (McCormick Place, South  
Building-Level 5, Meeting Rm S501a)

Div 1: Michael S. Gazzaniga. *William James  
Book Award Address.*

“Automatic Brains/Interpretive Minds”

*Chair:* Linda M. Bartoshuk

*Co-list:* 6, 7, 15, 25, 40

3 PM – 5 PM APA Plenary Sessions/Master  
Lectures/G. Stanley Hall Lectures

APA DIVISION 1  
**SOCIETY OF GENERAL PSYCHOLOGY**  
2002 PROGRAM

**Sunday, August 25, 2002 (8:00 AM – 2:00 PM)**

8:00 AM – 8:50 AM (McCormick Place, Lakeside Center-  
**Level 3, Meeting Rm E353a**)  
Div 1 Business Meeting

9:00 AM – 9:50 AM (McCormick Place, Lakeside Center-  
**Level 3, Meeting Rm E353a**)  
Div 1: Linda M. Bartoshuk. *Presidential address.*  
“You Are What You Eat: Supertasting and Health”  
*Chair:* Lyle E. Bourne, Jr.

10:00 AM – 11:50 AM (McCormick Place, Lakeside Center-  
**Level 2, Meeting Rm E253a**)  
Div 1: *1 hr Symposium.* “The Legacy of Anne Anastasi (1908-  
2001)”  
*Chair:* Peter Merenda

*Panelists:*  
Edwin P. Hollander  
Jonathan Galente  
Agnes N. O’Connell  
John D. Hogan  
Peter F. Merenda  
Susana P. Urbina  
Harold Takooshian  
Olivia Hooker  
Co-list 7, 26, 40

12:00 PM – 12:50 PM (McCormick Place, Lakeside Center-  
**Level 2, Meeting Rm E253a**)  
Div 1: Wilse Webb. *Ernest Hilgard Lifetime  
Achievement Award Address.*  
“Come to Think of It”  
*Chair:* Lewis P. Lipsitt  
Co-list: 2, 6, 7, 15

1:00 PM – 1:50 PM (McCormick Place, Lakeside Center-  
**Level 2, Meeting Rm E253a**)  
Div 1: *1 hr symposium.* “The Legacy of ‘Maestro’ Ernest  
R. Hilgard (1904-2001).  
*Chair:* Gordon Bower  
*Panelists:*  
David E. Leary  
Helen Joan Crawford  
Philip G. Zimbardo  
Co-list: 6, 7, 15, 26

9 AM – 12 noon Council Meeting  
2 PM – 3 PM Closing Plenary Session



## Race, Brain Size, and IQ

**J. Philippe Rushton**  
University of Western Ontario

*This article reviews the literature on racial-group differences in brain size and IQ. It documents: (1) a .40 correlation between brain size and cognitive ability; (2) mean group differences in brain size, with East Asians = 1,364 cm<sup>3</sup>, Whites = 1,347 cm<sup>3</sup>, and Blacks = 1,267 cm<sup>3</sup>; and (3) mean group differences in IQ scores with East Asians = 106, Whites = 100, and Blacks = 85, with sub-Saharan Africans = 70.*

I was tempted to put all the words in the title of this article in the same kind of "scare quotes" used by Allen (2002) whose article aimed "to finesse the 'race'-IQ debate" (his Abstract), to which the present paper is a reply. I even thought of titling it "The relations between so-called race, so-called IQ, and (much less convincingly) so-called brain size." Allen's exercise in deconstructionism notwithstanding, all the words in the title of my paper are as real as any constructs in behavioral science. If they were not, the empirical findings I am about to document could not have been independently confirmed across cultures and methodologies.

Nothing in the history of psychology has been as contentious as the question of ethnic and racial group differences in cognitive ability. Ever since World War I and the widespread use of standardized mental tests, mean group differences have been found again and again. Only their cause has been subject to real debate. Few, however, dare to "let it all hang out." The APA Task Force on intelligence opted for a "limited hangout," only acknowledging (after prodding) that with respect to "racial differences in the mean measured sizes of skulls and brains [with East Asians averaging the largest, followed by Whites, and then Blacks] ... there is indeed a small overall trend" (Neisser, 1997, p. 80). The three-way pattern in brain size is very well established and parallels the three-way pattern in IQ test scores.

In this paper I summarize the results of 150 years of research, most of which can be found in three

recent book-length reviews. Lynn and Vanhanen's (2002) *IQ and the Wealth of Nations* examined test scores from around the world and showed they are reliable, valid, and predictive of GNP and GDP, with a world average IQ of 90. Jensen's (1998) *The g Factor* shows that *g*, the general factor of mental ability, is (1) the most predictive aspect of cognitive ability tests; (2) related to brain size, heritability indices, and other biological factors; and (3) shows significant mean racial-group differences. My own *Race, Evolution, and Behavior* (Rushton,

**This article was submitted in response to " 'Race' and IQ" by Bem Allen that appeared in the Spring, 2002, issue of TGP.**

2000) reviews this literature and places it in an evolutionary context.

Jensen's (1969) famous *Harvard Educational Review* article concluded that: (1) IQ tests measure a general-ability dimension of great social relevance; (2) individual differences in IQ have a high heritability; (3) compensatory educational programs have proved generally ineffective in changing the relative status of individuals and groups on this dimension; (4) social-class differences in IQ have an appreciable genetic component; and most controversially (5) the mean Black-White group difference in IQ probably has some genetic component. *The Bell Curve* (Herrnstein & Murray, 1994) presented an update of this evidence for general readers, along with an original analysis of 11,878 youths (3,022 of whom were Black) from the 12-year National Longitudinal Survey of Youth. The analysis demonstrated that most 17-year-olds with high scores on the Armed Forces Qualification Test, regardless of ethnic background, went on to occupational success by their late 20s and early 30s while many of those with low scores went on to welfare dependency. Herrnstein and Murray's (1994) study also found that the average IQ for "African" Americans was lower than those for "Latino," "White," "Asian," and "Jewish" Americans (85, 89, 103, 106, and 113, respectively, pp. 273-278).

Today, the average 1.1 standard deviation effect size for the mean Black-White group difference in IQ is no longer in itself a matter of dispute. A meta-analytic review by Roth, Bevier, Bobko, Switzer, and Tyler (2001) extended the range of the effect to include college and university application tests such as the Scholastic Achievement Test (SAT;  $N = 2.4$  million) and the Graduate Record Examination (GRE;  $N = 2.3$  million), as well as to tests for job applicants in corporate settings ( $N = 0.5$  million), and in the military ( $N = 0.4$  million). Since test scores are the best predictor of economic success in Western society (Schmidt & Hunter, 1998), these group differences have important societal outcomes (Gottfredson, 1997).

### Brain Size-IQ Correlates Within-Race

Among individuals, intelligence is related to brain size. About two-dozen studies using Magnetic Resonance Imaging (MRI) to measure the volume of the human brain have found an overall correlation with IQ of greater than .40 (Rushton & Ankney, 1996; Vernon, Wickett, Bazana, & Stelmack, 2000). Altogether there are now about 15 studies on over 700 subjects showing that individuals with larger brain volumes have higher IQ scores. The greater than .40 correlation found using MRI is much higher than the .20 correlation found in earlier research using simple head size measures, though even those simple head size measures also showed a significant relationship. Rushton and Ankney (1996) reviewed 32 studies correlating measures of external head size with IQ scores, or with measures of educational and occupational achievement, and found a mean  $r = .20$  for people of all ages, both sexes, and various ethnic backgrounds, including African Americans.

The most likely reason why larger brains are, on average, more intelligent than smaller brains is that they contain more neurons and synapses, which make them more efficient. Haier et al. (1995) tested the brain efficiency hypothesis by using MRI to measure brain volume and glucose metabolic rate (GMR) to measure glucose uptake (an indicator of energy use). They found a correlation of  $-.58$  between glucose metabolic rate and IQ, showing that individuals with higher IQ scores have more efficient brains because they use less energy in performing a given cognitive task. And, larger brains tended to be more efficient brains. Several other studies, all supporting the within-race brain-size/efficiency model were reviewed in Gignac, Vernon, and Wickett (in press). Further, individual energy use increases with the increasing complexity of the cognitive task.

Twin studies indicate that genes contribute 90% of the variance to brain volume measured by MRI, and that common genetic effects mediate from 50% to 100% of the brain-size/IQ correlation (Posthuma et al., 2002; Thompson et al., 2002). Importantly, studies also show that the correlation between brain size and IQ occurs *within-families* not just *between-families*, so that the usual socioeconomic factors on which families differ (e.g., parental income and educational level, child rearing style, general nutrition, schools attended, quality of neighborhood) cannot be responsible (Gignac et al., in press; Jensen, 1994; Jensen & Johnson, 1994). (One study that examined only sisters failed to find the within-family relation; Schoenemann, Budinger, Sarich, & Wang, 2000). Families with larger brains overall tend to have higher IQs and, within a family, the siblings with the larger brains tend to have higher IQ scores.

### Race Differences in Brain Size

Race differences in mean brain size are observable at birth. For example, I (Rushton, 1997) analyzed data from the Collaborative Perinatal Project that recorded head circumference measurements and IQ scores from 50,000 children followed from birth to age seven (Broman, Nichols, Shaugnessy, & Kennedy, 1987). As shown in Figure 1, at birth, four months, one year, and seven years, the Asian American children averaged larger cranial volumes than did the White children, who averaged larger cranial volumes than did the Black children. Within each race, the children with larger cranial capacities had higher IQ scores. By age seven, the Asian American children averaged an IQ of 110, the White children averaged an IQ of 102, and the Black children averaged an IQ of 90. Since the Asian American children were the shortest in stature and the lightest in weight while the Black children were the tallest in stature and the heaviest in weight, these race differences in brain-size/IQ relations were not due to body size.

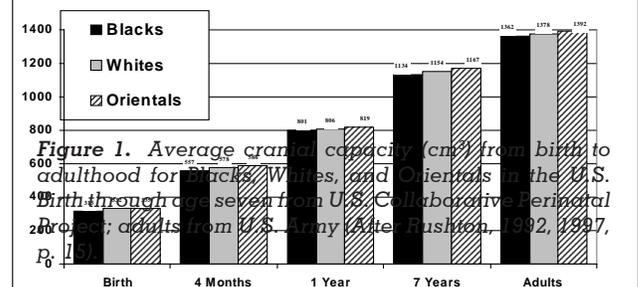


Figure 1. Average cranial capacity (cm<sup>3</sup>) from birth to adulthood for Blacks, Whites, and Orientals in the U.S. Birth through age seven from U.S. Collaborative Perinatal Project; adults from U.S. Army (After Rushton, 1992, 1997, 1999).

External head size measurements (length, width, height) also have been used to estimate cranial capacities in adults. I carried out several studies of large archival data sets. Rushton (1991) examined head size measures in 24 international military samples collated by the U.S. National Aeronautics and Space Administration. After adjusting for the effects of body height, weight, and surface area, it found the mean cranial capacity for East Asians was 1,460 and for Europeans 1,446 cm<sup>3</sup>. Rushton (1992; also see Figure 1) demonstrated that even after adjusting for the effects of body size, sex, and military rank in a stratified random sample of over 6,000 U.S. Army personnel, East Asians, Whites, and Blacks averaged cranial capacities of 1,416, 1,380, and 1,359 cm<sup>3</sup>, respectively. Rushton (1993) re-analyzed a set of anthropometric data originally published by Hershkovits who concluded there were not race differences in cranial capacity. The new analysis revealed that Whites averaged a cranial capacity of 1,421 and Blacks, 1,295 cm<sup>3</sup>. Finally, Rushton (1994) analyzed data obtained on tens of thousands of people from around the world collated by the International Labour Office in Geneva, Switzerland. It showed that after adjusting for the effects of body size and sex, samples from the Pacific Rim, Europe, and Africa averaged cranial capacities, of 1,308, 1,297, and 1,241 cm<sup>3</sup> respectively.

These results, based on calculating average cranial capacity from external head size measures, joined those from dozens of other studies from the 1840s to the present on different samples using different methods, all revealing the same strong pattern. Three other methods of measuring brain size all reveal the same pattern of mean racial group differences: (1) endocranial volume from empty skulls, (2) wet brain weight at autopsy, and (3) high tech magnetic resonance imaging (MRI). For example, using MRI technology, Harvey, Persaud, Ron, Baker, and Murray (1994) found that 41 Blacks in Britain averaged a smaller brain volume than did 67 British Whites.

Using endocranial volume, the American anthropologist Samuel George Morton (1849) measured over 1,000 skulls by filling them with packing material and found that Blacks averaged about 5 cubic inches less cranial capacity than Whites. His results were confirmed by Todd (1923), Gordon (1934), and Simmons (1942). In 1984 Beals, Smith, and Dodd carried out the most extensive study of racial group differences in endocranial volume to date, by measuring 20,000 skulls from around the world. They reported that East Asians, Europeans,

and Africans averaged cranial volumes of 1,415, 1,362, and 1,268 cm<sup>3</sup>, respectively.

Using the method of weighing brains at autopsy, Paul Broca (1873) reported that Whites averaged

heavier brains than did Blacks, with larger frontal lobes, and more complex convolutions. Broca also reported the mean Black-White group differences using the endocranial volume method, and found that East Asians averaged larger cranial capacities than Europeans. Subsequent autopsy studies have found a mean Black-White group difference in brain weight of about 100 grams (Bean, 1906; Mall, 1909; Pearl, 1934; Vint, 1934). A 1980 autopsy study of 1,261 American adults by Ho, Roessmann, Straumfjord, and Monroe found that the 811 White Americans in their sample averaged 1,323 grams and 450 Black Americans averaged 1,223 grams – a difference of 100 grams. Since the Blacks and Whites in the study were similar in body size, it was not responsible for the differences in brain weight.

Rushton (2000; Rushton & Ankney, 1996) summarized the world database using the three methods on which there are a sufficient number of studies (autopsies, endocranial volume, head measurements), as well as head measurements corrected for body size (see pp. 126-132, Table 6.6). The results in cm<sup>3</sup> or equivalents were: East Asians = 1,351, 1,415, 1,335, 1,356 (mean = 1,364); Whites = 1,356, 1,362, 1,341, 1,329 (mean = 1,347); and Blacks = 1,223, 1,268, 1,284, and 1,294 (mean = 1,267). The overall mean for East Asians is 17 cm<sup>3</sup> more than that for Whites and 97 cm<sup>3</sup> more than that for Blacks. Within-race differences, due to differences in method of estimation, averaged 31 cm<sup>3</sup>. Since one cubic inch of brain matter contains millions of brain cells and hundreds of millions of synapses or neural connections, it would be surprising indeed if these group differences in average brain size have nothing at all to do with the group differences in average IQ.

It is important to note that Jensen and Johnson (1994) showed that the head size x IQ correlation exists within-families as well as between-families for Blacks, as for Whites, indicating an intrinsic or functional relationship within both races. Equally important is the fact that within each sex, Blacks and Whites fit the same regression line of head size on IQ. That is, when Blacks and Whites are perfectly matched for true-score IQ (i.e., IQ corrected for measurement error), whether at the Black mean or the White mean, the overall average Black-White group difference in head circumference is virtually nil. (Matching Blacks and Whites for IQ eliminates the average difference in head size, but matching the groups on head size does not equalize their IQs. This shows that brain size is only one, though a very important one, of a number of

brain factors involved in IQ.)

### **Race Differences in Cognitive Ability: A Global Perspective**

Hundreds of studies on millions of people have now confirmed the *three-way* racial pattern in average levels of cognitive ability (Jensen, 1998; Lynn & Vanhanen, 2002; Rushton, 2000). Around the world, the average IQ for East Asians centers around 106; that for Whites, about 100; and that for Blacks, about 85 in the U.S. and 70 in sub-Saharan Africa. This same order of mean group differences is also found on "culture-fair" tests and on reaction-time tasks.

Just as in the case of brain size, racial-group differences in mean IQ can be seen early in development. For example, the Black and the White three-year-old children in the standardization sample of the Stanford-Binet IV show a one standard deviation mean difference after being matched on gender, birth order, and maternal education. Similarly, the Black and the White 2½- to 6-year-old children in the U.S. standardization sample of the Differential Aptitude Scale have a one standard deviation mean difference. To date, data are not available for East Asian children at the youngest ages. By age six, however, the East Asian children's IQ on the Differential Aptitude Battery averaged 107, compared to 103 for Whites and 89 for Blacks. Further, the size of the average Black-White group difference does not change significantly over the developmental period from three years of age on through to adulthood.

The average IQ obtained in studies of sub-Saharan Africans is 15 to 30 points (1 to 2 *SDs*) lower than elsewhere in the world. Lynn and Vanhanen (2002) reviewed over two-dozen studies from West, Central, East, and Southern Africa and found they yield an average IQ of around 70. For example, in Nigeria, Fahrmeier (1975) collected data on 375 6- to 13-year-olds in a study of the effects of schooling on cognitive development. The children's mean score on the Colored Progressive Matrices was 12 out of 36, giving them an IQ equivalent of less than 70. In Ghana, Glewwe and Jacoby (1992) reported on a World Bank study that tested a representative sample of 1,736 11- to 20-year-olds from the entire country. All had completed primary school; half were attending "middle-school." Their mean score on the Colored Progressive Matrices was 19 out of 36, which gives an IQ equivalent of less than 70. In Zimbabwe, Zindi (1994) gave the Wechsler Intelligence Scale for Children-Revised (WISC-R) and the Standard Progressive Matrices to 204 African 12- to 14-year-olds, and reported mean IQ scores

of 67 on the WISC-R and 72 on the Matrices. In South Africa, Owen (1992) found that 1,093 African high school students solved 28 out of 60 problems on the Standard Progressive Matrices, which is around the tenth percentile, or an IQ equivalent of about 80.

University students in South Africa also show low mean test scores. A study at the University of Venda in South Africa's Northern Province by Grieve and Viljoen (2000) found 30 students in 4th-year law and commerce averaged a score of 37 out of 60 on the Standard Progressive Matrices, equivalent to an IQ equivalent of 78 on U.S. norms. A study at South Africa's University of the North by Zaaiman, van der Flier, and Thijs (2001) found the highest scoring African sample to that date — 147 first-year mathematics and science students who had an IQ equivalent of 100. Their relatively high mean score may have been because they were mathematics and science students, and also because they had been specially selected for admission to the university from a pool of 700 on the basis of a mathematics and science selection test. My colleagues and I found similar results with first-year psychology students and even with more highly select engineering students at the University of the Witwatersrand in Johannesburg (Rushton & Skuy, 2000; Rushton, Skuy, & Fridjohn, in press, 2002; Skuy, Gewer, Osrin, Khunou, Fridjhon, & Rushton, 2002). Under optimal testing conditions, the African students ranged in IQs from 84 to 103; in contrast, the White university students had IQs from 105 to 111; East Indian students had intermediate IQs, from 102 to 106.

In the U.S., most who have studied the problem have concluded that the tests *are* valid measures of racial differences, at least for people sharing the culture of the authors of the test (e.g., Neisser et al., 1996, p. 93), though many critics claim that Western-developed IQ tests are not valid for groups as culturally different as sub-Saharan Africans. A review by Kendall, Verster, and von Mollendorf (1988), however, showed that test scores for Africans have about equal predictive validity as those for non-Africans (e.g., .20 to .50 for students' school grades and for employees' job performance). The review also showed that many of the factors that influence scores in Africans are the same as those for Whites (e.g., coming from an urban versus a rural environment; being a science rather than an arts student; having had practice on the tests). Similarly, Rushton et al. (2002) found that scores from African and non-African engineering students at the University of the Witwatersrand on one IQ test correlated with scores on a different test measured three months

earlier (.60 for Africans; .70 for non-Africans) and with end-of-year exam marks measured three months later (.34 for Africans; .27 for non-Africans).

Moreover, several studies in sub-Saharan Africa have replicated Jensen's (1998) findings in the U.S., which show that Black-White IQ differences are mainly on *g*, the general factor of intelligence. Lynn and Owen (1994) were the first to find that Africans and Whites differed mainly on the *g* factor in their analysis of data from over 3,000 African, East Indian and White high-school students given 10 sub-tests of the South African Junior Aptitude Test. Subsequently, Rushton and Skuy (2000, in press, 2002) carried out item analyses in their studies of South African university students and found that the more the items measured *g* (estimated by item-total correlations), the more they were related to standardized African-White differences.

Other psychometric studies show the internal validity of the tests, as in Owen's (1992) study on thousands of high school students, and in Rushton and Skuy's (2000, in press, 2002) series of studies on hundreds of university students. Identical item structures were found in Africans, Whites, and East Indians. Items found difficult by one group were difficult for the others; items found easy by one group were easy for the others (mean  $r_s = .90$ ,  $p < .001$ ). The item-total score correlations for Africans, Whites, and East Indians were also similar, showing the items measured similar psychometric constructs in all three groups. The only reliable example of bias so far discovered in this extensive literature is the rather obvious internal bias on the Vocabulary components of tests like the Wechsler for groups that do not have English as their first language. But even here, the language factor only accounts for at most 0.5 of a standard deviation, out of the overall 2.0 standard deviation difference, between Africans and Whites.

Research on reaction time, one of the simplest culture-free cognitive measures, corroborates the results from the standardized tests. Most reaction time tasks are so easy that 9- to 12-year-old children can perform them in less than one second. But even on these very simple tests, children with higher IQ scores perform faster than do children with lower scores. (The explanation usually adopted is that reaction times measure the neurophysiological efficiency of the brain's capacity to process information accurately — the same ability measured by intelligence tests.) Since children are not trained to perform well on reaction time

tasks (as they are on certain paper-and-pencil tests), the advantage of those with higher IQ scores on these tasks cannot arise from practice, familiarity, education, or training.

Lynn and his colleagues carried out a series of reaction time studies on over 1,000 nine-year-old East Asian children in Japan and Hong Kong, White children in Britain and Ireland, and Black children in South Africa (summarized by Lynn & Vanhannen, 2002, pp. 66-67). The East Asian children in Hong Kong and Japan obtained the highest IQs, followed in descending order by the White children in Britain and Ireland, and then the Black children in South Africa. The same three-way pattern of average scores on these and other reaction time tasks (i.e., East Asians faster than Whites and Whites faster than Blacks) is found within the U.S. (Jensen, 1998).

### Conclusion

It is an established finding of behavioral science that there is great variability within each racial group and it is well established that there are average differences in brain size and cognitive ability between races. There is also an ethical consensus that we treat people as individuals.

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## Why Should You Belong to APA?

Message from Philip G.  
Zimbardo, PhD, APA President  
and Division 1 Fellow

One of the first things that newly-elected APA Presidents do is get briefed by staff on the structure, function and activities of APA's organization and its members. When I first became President I knew about as much about APA as the typical member -- I subscribed to the journals, I read parts of the Monitor, gave talks at conventions, and I knew that there was a large organization "somewhere" doing things in support of Psychology. Unlike most APA presidents, I was a total outsider to APA governance, never having had anything to do with its Council of Representatives, task forces or many committees. I paid my dues, used APA when I needed to, but never worked in its trenches. I won the election based on solely on the credits I had earned as an academic-scientist.

Now that I am well into my Presidency, I can say it has been an eye opener for me to discover the range, number and extent of projects, task forces, actions and initiatives meant to further our discipline, advocate for psychological science, and apply psychological knowledge in the service of society. I also had no idea of the large staff infrastructure at APA that serves as our eyes, ears, hands and feet in making sure that psychology gets funded and represented at federal and local levels, in making sure that the very best of science, application and practice come to the attention of policy makers and implementers, and in fostering psychology's collaborations with other scientific disciplines.

I realize I may sound like a cult convert, but I want to share with my colleagues in Division 1 a few of the things that I've learned that APA does for its scientists and scientist-practitioners. I hope it will help dispel the myth that "APA does nothing for scientists or academics," or "my dues go only to support Practice." The more I have learned, the more I have been motivated to contribute time, energy and talents to further these important efforts (as I will outline at the end of this note). If you want to know the whole gamut of things the Science Directorate does, please check out its web page -- [www.apa.org/science](http://www.apa.org/science).

Here are a few highlights in just three areas -- advocacy, training, and what I will call "burning issues." These activities underscore what APA does "behind the scenes" in service to us all.

**Advocacy:** You probably all know that APA has a large presence on Capitol Hill through its activism for mental health parity and prescription privileges. But did you know that APA has an equally vocal presence for science matters? APA staffers monitor what is happening on the Hill and in Federal Agencies relevant to researchers (NSF and NIH -- including institutes NIMH, NICHD, NCI, NINDS, NIDA, NIAAA, NIA; and VA, NASA, DOE, DoD, and FDA to name a few -- a lot of alphabet soup, but rich in funds that we want to tap into). They work in many ways to advocate for behavioral science funding, and for report language in federal bills in support of behavioral science research -- by proposing legislative language, by testifying before congressional committees, and by visiting with congressional members and their staff. Much of this work is done in coalitions, and APA's staffers take leading roles. Just for starters, PPO-Science's Karen Studwell chairs the Friends of The NICHD (a coalition that advocates for the National Institute of Child Health and Human Development), PPO-Science's Director Geoff Mumford is the treasurer of the Coalition for National Science Funding, PPO-Science's Heather Kelly is the treasurer of the Defense Research Coalition, and PPO-Science's Pat Kobor is cochair for the Coalition for the Advancement of Health through Behavioral and Social Sciences Research. In addition to "lobbying" efforts, APA staff continually monitor and respond to doings in the federal research and regulation arena. Whenever there are requests for comment on proposed regulations or changes to the research landscape, staff request input from relevant experts and draft a comment or letter from APA. In the last year APA has made comments on a wide variety of proposed legislative and regulative issues from education, animal research, medical records privacy, data sharing, to standards for IRB accreditation. For each of these issues, members

have been asked for their input – to make comments on written documents, to come to Washington to help put on congressional events, such as briefings or research exhibits, or to let APA take them to talk directly to their congressional representatives on the Hill about specific legislative issues. You can find out about these by subscribing to a monthly e-newsletter that will keep you up to date – its called SPIN. Look at it via <http://www.apa.org/ppo/issues/spinhome.html> or sign up by sending an email to [ppo@apa.org](mailto:ppo@apa.org)

APA also advocates in a different way -- there is regular APA representation at major meetings of other societies and organizations (e.g., Society for Neuroscience, American Association for the Advancement of Science, National Academies of Science, etc.), where larger science initiatives and issues are discussed. In these venues APA presents information on such issues as ethics, research regulation and IRBs, or gives comments to National Research Council committees on their scope and work plans. APA has an important place at the science table -- I attend a biannual conference of the presidents of over 60 scientific societies, where psychology is the only social/ behavioral science represented, and have been able to show these physicists, biologists and others of the many ways in which psychology is relevant to issues of national defense, terrorism, and more. APA staff also attend regular meetings with other science groups and with policy makers (for example the Office of Science and Technology Policy -- the white house's advisory arm) to discuss current science opportunities and issues, and consult with federal agencies on applications of behavioral research to their concerns.

**Training:** APA's most visible student activities occur through its graduate student association, APAGS -- but did you know that the Science Directorate sponsors the "Science Student Council" -- a group of 10 students who engage other science graduate students in convention programming, an extensive web presence, an email network, a grant program and more? The Science Directorate is also involved in some direct training activities. One activity is for more established researchers -- the Science Directorate's "Advanced Training Institutes, " first held in 1999, offer week-long, hands-on courses on cutting-edge methodologies such as fMRI techniques or longitudinal modeling. Another activity is directed toward advanced graduate students and young faculty, the Academic Career Workshop. This workshop, which delves into the nitty gritty of finding, getting and keeping an academic research position, has been offered for several years at convention and at smaller scientific meetings. APA offers many more

opportunities for learning -- from teaching tips for faculty, to a week course on psychology in general for outstanding science undergraduates, to the Exploring Behavior Week outreach to high school students. I will add that each of these activities is something in which you or your students could participate. I am planning to have APA develop the standard text for H.S. psychology courses, to collaborate with APS in promoting psychology science at H.S. science fairs, and to develop new web sites for training H.S. and College teachers in being more effective in their teaching.

**"Burning Issues" Activities:** You may know about APA's standard governance groups -- the Board of Scientific Affairs (BSA) consists of 9 outstanding scientists (current Chair is Harry Reis, Div 8 Executive Officer), and its three standing Committees, CPTA (Committee on Psychological Tests and Assessments), CARE (Committee on Animal Research & Ethics) and COSA (Committee on Scientific Awards). But you may not know that BSA regularly supports the establishment of working groups or task forces that address timely issues. Recent ones are a working group on Internet research, a task force on testing on the Internet, and a working group on the implications of the genetic revolution for psychological research and knowledge, and an ad hoc group to address current issues in research regulation, especially IRB activities. Each of these groups, comprised of experts in the topics, has been called together to survey the issues and make recommendations about what to do next. For example, the research on the Internet group (chaired by Robert Kraut) is looking at technical, ethical, and other implications of using the internet as a tool for collecting data, as a means of assistance to researchers who are or intend to use this tool. The IRB group is planning to develop informational materials to facilitate IRB-researcher-administration interaction.

I could continue this list of things the science directorate and APA do for social psychologists and social psychology -- I have not even mentioned their regular activities that support the field such as research based awards, student grants, conference awards, and more, that demonstrate that APA respects and supports its scientific foundation. But there is a more important point that I would like to address. This is the *perception* that APA does nothing and what you can do about it. When I mentioned this perception to Science Directorate staff (headed by Dr. Kurt Salzinger), they said it was something they constantly worry about -- and wondered how much their regular efforts -- substantial communications such as, *Psychological Science Agenda*, the bi-monthly newsletter; listserv notes; and the Science sections

in the monthly *Monitor* -- get read or noticed by colleagues. Only you can answer that one -- but I want to remind you that the marvelous activities APA does in support of science are only possible when members (that is YOU!) are generous with their time, effort and attention. In each of their activities, the Science Directorate draws on member expertise, ideas and enthusiasm. So when you read a call for comments on your Division listserv, or read about a new important issue for which APA might be active, know that your input, your response and your opinion are not only important, they are the heart of what APA is all about. I want to assure you that there are eager ears waiting to hear from you -- mine, Bob Sternberg's (APA's president elect who will carry on the scientific tradition), and the staff of the Science Directorate.

Finally, let me mention a few things that I will be focusing on during my presidential tenure, in addi-

tion to helping develop a H.S. text and Psychology Science Fairs. I am working with the heads of APS to find areas in which our organizations can meaningfully collaborate for the benefit of psychological science. I am advancing an initiative to develop a compendium of all research psychologists have done that demonstrates a significant difference in improving some aspect of our lives, individually or collectively. Data are coming in from this survey (to which I would like each of you to contribute, see <http://research.apa.org/survey/compendium/> ). When collated and organized by a task force of our experts, this compendium will be invaluable for creating a more positive image of psychology to Congress, the media and to the public.

I hope this quick overview has been of some value to you and encourages you to continue your APA membership, join if you are not, and promote APA to your students. One last word, the Chicago Convention (Aug 22-25) will be the best ever, in part because I am working closely with the Board of Convention Affairs to have many new, amazing features, fabulous events, special guests with fun and good times and rock and roll for all.