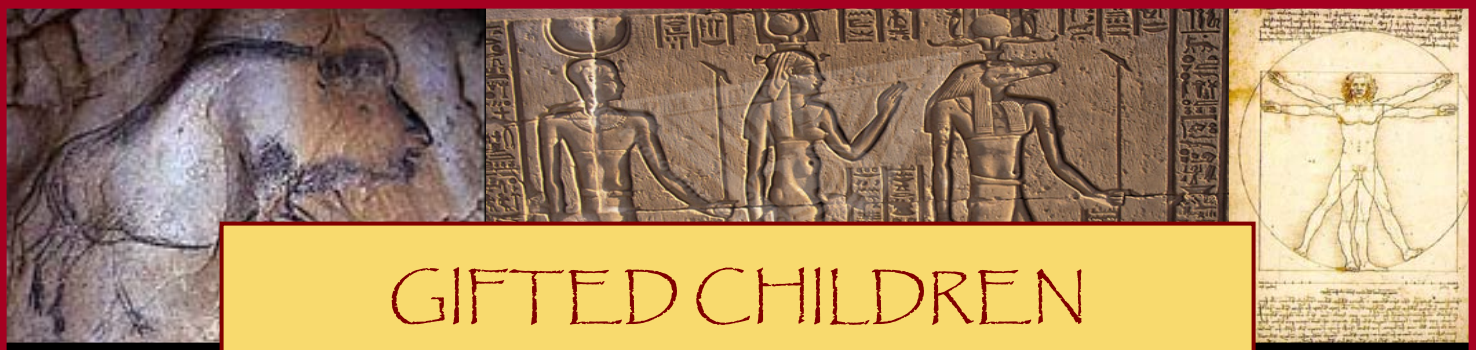

GIFTED CHILDREN

An Electronic Journal of the AERA SIG Research on Giftedness and Talent.

Volume 1 Number 1 Fall 2006

Contents

Introduction to the Premier Issue

Jonathan A. Plucker, Indiana University

Welcome to the premier issue of the Research on Giftedness and Talent SIG's new electronic journal. The idea of a new journal on giftedness and talent emerged from the SIG's meetings during Carolyn Callahan's term as SIG chair. Soon thereafter, the publications committee, which included Del Siegle, Dona Matthews, and myself, began planning for the journal.

We reached consensus on a number of issues, including that:

1. There is desire and support for a new, research-focused journal on giftedness and gifted education.
2. An electronic publication, perhaps distributed twice per year as a PDF, appears to be the most cost-effective option.
3. The content should be something for which there is not a clear home right now in existing journals within the field, such as policy studies, replication of previous research, evaluation studies, point-counterpoint, editorial/advocacy articles (i.e., strongly advocating for a specific point of view), and summaries of relevant research from other fields.
4. At the same time, the bias against electronic publication regarding tenure and promotion decisions will make it difficult to solicit research articles with the content mentioned above. Several SIG members also believe that, if presented well, such studies are publishable in our existing journals.
5. As a result, we suggested the following content for the first few issues: An "interactive" main article (interactive in that it is either a point-counterpoint or a main article with a respondent and a response to the respondent), an interview with a leading figure in gifted education (i.e., Five Questions With …), an interview with a leading figure outside of gifted education (i.e., Five Questions on Gifted Education With …), summaries of research articles related to the field but published outside of the field, a review of a classic article or book, and a brief section of interesting quotes, web links, and other useful information. Each issue could also contain summaries of conferences that feature content on giftedness or gifted education, such as AERA, APA, and NAGC, among many others.

The SIG board approved these ideas and asked the publications committee to move

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You need chaos in your soul to give birth to a dancing star.

Nietzsche

Quick Hits: Summaries of Relevant Research Published Outside of the Field

Jocelyn Holden
Graduate Research Assistant
Center for Evaluation & Education Policy, Indiana University

Howard, R. W. (2005). Are gender differences in high achievement disappearing? A test in one intellectual domain. *Journal of Biosocial Science, 37*, 371-380.

Males have traditionally dominated the upper levels of achievement. Why this gender difference? There are two main schools of thought on this topic. One view takes the evolutionary perspective that men dominate the higher achievement levels because of innate differences in ability or characteristics such as competitiveness. The other view is that the disproportionate number of males at high achievement levels is not due to ability differences between the sexes but rather to differences in social factors affecting men and women. Recently the role of women and the social factors impacting them have changed dramatically. If there are no innate differences in ability between men and women then there should be growing numbers of women in higher levels of achievement. This study seeks to discover if this is the case, using a data set of individuals participating in international chess. The data is used to address the question of whether gender differences do exist in the domain of international chess and if the number of highly ranked women in international chess is growing over the years. Results indicate that for the domain of international chess, males have always been and still are more prevalent than females in the upper levels of achievement despite the societal changes experienced. Possible explanations for the gender difference in achievement are offered. ❖

Johnson, J., Im-Bolter, N., & Pascual-Leone, J. (2003). Development of mental attention in gifted and mainstream children: The role of mental capacity, inhibition, and speed of processing. *Child Development, 74*, 1594-1614.

Previous research has indicated that intellectually gifted children tend to score higher on tests of working memory and outperform their peers on tasks involving inhibitory processes. Although from previous research it can be guessed that gifted children exhibit more efficient inhibition processes, this hypothesis has yet to be systematically tested. It has also been found that although gifted children often respond more rapidly than their mainstream peers, there are situations when they strategically moderate the speed of their response. This article explores the question of whether gifted children differ from mainstream children on measures of mental-attentional capacity, cognitive inhibition, and processing speed. Consistent with the hypothesis, the results showed that gifted children responded more quickly than their mainstream peers in speeded tasks, better resisted interference which required effortful inhibition, and scored higher in general on measures of working memory. The design of the study also allowed for comparisons of working memory and inhibition between age groups. Results showed that, as expected, older children performed better on tests of working memory and faster on timed tasks than younger children. The authors explain these results by asserting that the main difference between gifted and mainstream children is "know-how," whereas the difference in age group performance expresses a tradeoff between working memory capacity and the actual demand of the task. ❖

Madjar, N. (2005). The contributions of different groups of individuals to employees' creativity. *Advances in Developing Human Resources, 7*, 182-206.

This literature review explores the roles and relative importance of different groups of individuals to employee creativity in an organization. There is evidence to suggest that employee creativity contributes greatly to organizational innovation, effectiveness, and survival, thus information on the best ways to facilitate creativity in employees is vital. This article explores previous research on the contributions of three different groups of individuals to employee creativity: coworkers and supervisors; customers, clients, and coworkers outside of the employee's unit; and friends, family, and other non-work-related individuals. Creativity facilitated by encouragement and support versus creativity facilitated by novel information is discussed, as well as the hypothesized mechanisms through which these types of facilitation are thought to work. ❖

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Mills, C. J., & Brody, L. E. (2002). The doubly exceptional child: A principal's dilemma. *National Association of Elementary School Principals, 20*, 1-2.

Doubly exceptional students are students with concurrent exceptional academic or intellectual strengths and one or more learning disabilities. Underachievement for these students is not due to motivational, emotional, or environmental problems but is due, rather, to differences in the processing of information causing exceptional performance in certain subjects as well as severe difficulty in others. This short article discusses issues associated with doubly exceptional students from the perspective of a school principal. What can you do for a student with ADHD who can't concentrate long enough to write a coherent paper in spite of having exceptional verbal abilities? Discussed in this article are different categories of doubly exceptional students, clues to recognizing these students, and suggestions for principals for ways of helping these students reach their potential. ❖

Rothenberg, A., & Wyshak, G. (2004). Family background and genius. *Canadian Journal of Psychiatry, 49*, 185-191.

This article focuses on the debate of whether or not creativity and genius are inherited. It begins by summarizing the methods and findings of several prominent 19th century psychologists (including Galton, Cattell, and Terman), concluding that from this data the belief that genius is inherited could not be definitively supported or refuted. The article then presents data tracing the family backgrounds of a group of eminent 20th century individuals. Data is analyzed in terms of direct occupational inheritance, applied vs. performance occupational inheritance, and parental unfulfilled creative wishes with the intention of providing a more definitive answer to the question of the heritability of genius and creativity. Results show a lack of direct inheritance of creativity and genius, although there do appear to be relationships between eminent individuals and unfulfilled creative wishes of their immediate family members. Thus, this article provides support for the idea that creativity and genius are not completely inherited traits. ❖

Swanson, H. L. (2005). Cognitive processes that underlie mathematical precociousness in young Children. *Journal of Experimental Child Psychology, 93*, 239-264.

To date, several studies have been done looking at individual differences in cognitive processing for elementary students with mathematical disabilities but very little has been done looking at the cognitive processing in elementary students with advanced mathematical ability. This study aims to determine which components of working memory are involved in mathematical precociousness in children aged 6-8. Particularly, the study looks at two different models of the relationship between mathematical precociousness and working memory: one model saying that the relationship between working memory and problem solving is mediated by the phonological system, the other saying that executive tasks are independent of the phonological system. Results found mathematically precocious children to perform better than their average achieving peers on measures of executive processing, inhibition and naming speed, and found the groups to perform equally well on measures of the phonological loop and visual spatial sketchpad. These results support the notion that the phonological loop operates independently from the other executive functions in working memory, and that executive functioning is an important predictor of mathematical precociousness in young children. ❖

Upcoming Meetings and Conferences

National Association for Gifted children, Charlotte, NC	**November 2-5, 2006**
American Education Research Association (AERA), Chicago, IL	**April 9-13, 2007**
Council for Exceptional Children, Louisville, KY	**April 18-21, 2007**
American Psychological Association, San Francisco, CA	**August 17-20, 2007**

Main Article

Redux—Neuroscience Meets Pedagogy: A Matter of Form and Implications for Gifted Education

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The following piece was an invited commentary and featured as a guest entry on the blog of the Director of the Krasnow Institute, James L. Olds (krasnow.Blogspot.com) on Thursday, November 10, 2005. In the last year, there have been several editorial commentaries in top flight science journals on the topic of the potential for neuroscience to inform educational practice. Despite the historical reticence of the neuroscience community to comment on these possibilities, the engine of science, in search of meaningful questions, is headed in this direction…….

> This week's editorial by Elsbeth Stern in the journal *Science*, "Pedagogy Meets Neuroscience," is the crest of a wave that began back in June when *The Journal of Neuroscience* published the commentary, "Science Education: A Neuroscientist's View of Translational Medicine" (Schwartz-Bloom, 2005) and *Nature* printed, "Big Plans for Little Brains" (Gura, 2005). The topics of each of these pieces address the potential for neuroscience to inform and reform educational policy, intervention, and practice. This issue led to my interdisciplinary graduate training in educational psychology and neuroscience, which included experiments on the effects of Ritalin on learning and memory in hyperactive rats, and using EEG to explore the abilities of intellectually gifted and hyperactive adolescent boys to shift between academic and creative tasks. Michael Posner once shared with me videotaped discussions between cognitive scientists, neuroscientists, and education professionals brought together by a philanthropic organization in hopes of generating interdisciplinary research topics.
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> I have witnessed the approach-avoidance dance between the fields of neuroscience and education for about 9 years now. On one hand, neuroscience has been reticent until now to consider the paradigmatic influence that educational psychology could have on discerning relevant research hypotheses. Indeed, the neuroimaging methods we use to adequately explore cognition, its development, and the nature of individual differences are just beginning to mature from their infancy. In this same issue of *Science*, there is a report that anomalies in certain genes that guide brain development are now linked to dyslexia. But in many ways, the metric between neuroscience and education is still off. Cognition viewed in the lab doesn't necessarily reflect "real-world" cognition, at least not in the way that practitioners think about it. On the other hand, educators have been quick to conform to whatever pieces of information about the brain they can learn from the popular press and self-proclaimed experts. Intervention techniques that currently exist perturb the plastic brain, but for how long?
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> John Bruer, President of the McDonnell Foundation, once proclaimed it a "bridge too far" to cross. Now, just recently, the National Science Foundation has laid the foundations of those bridges with their Science of Learning endowments to University of Washington, Stanford, Dartmouth, Carnegie-Mellon, and Boston University. In my own talks about the neuroimaging studies that my lab performs on nonverbal reasoning, I preface remarks to educational audiences with two main topics. First, why it looks like we know so much when we know so little. Indeed, until the advent of neuroimaging, members of the animal kingdom were our "age-old experts." And second, the need for developing greater scientific literacy so that people are equipped with the skill to evaluate translated scientific information. The challenge on the front of science involves innovating experimentation that will allow us to characterize cognitive function with greater ecological validity so that neuroscience can potentially inform and reform how we educate. We also have a responsibility to promote scientific literacy. The challenge on the front of education is to refrain from conforming to ideas and information that are still new and unreplicated.

So, what does this mean for the field of gifted education in particular? In the review article "The Functional Anatomy of Talent," I outline key intersections between cognitive neuroscience, gifted education, and psychological and psychometric measures of intelligence and expertise (Kalbfleisch, 2004). There are areas that are ripe for extended investigation using the tools and methods of cognitive neuroscience. We still know very little about the typical functional signatures of the developing brain when it is engaged in cognitive processes associated with learning and higher level thinking.

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(Kalbfleish, continued)

In the shorter term, however, clues about the gifted brain are emerging from structural neuroimaging studies. A recently published study suggests that the structural brains of individuals with superior levels of intelligence undergo developmental changes that are very different than the growth patterns associated with typically developing children (Shaw et al., 2006).

Shaw and colleagues studied the largest sample to date in individuals that span from early childhood age to young adulthood (307 individuals, ages 3.8–29 years) that begins to characterize the dynamic relationship between structural brain development and aptitude (IQ) as assessed by the Wechsler Scales of Intelligence. Specifically, the authors report that children with superior levels of intelligence experience a markedly different pattern of brain development from children with average and high intelligence. Children with superior intelligence appear to have thinner cortices in prefrontal cortex than others their age, followed by a rapid increase in cortical thickness which peaks around age 11 and wanes later in adolescence. The prefrontal cortex facilitates processes associated with higher level cognition such as working memory and reasoning. The authors suggest this pattern creates the opportunity for optimal plasticity over the course of development and may help explain some of the individual differences we see in developing children. The average intelligence group displayed a pattern of continuing decline in orbitofrontal areas (located at the very bottom of the prefrontal cortex) over the same period or an increase in superior areas of frontal cortex that peak around the ages of 7-8. In keeping with this, overall age-related changes were reported in that a negative correlation between cortical thickness and IQ was observed in early childhood (3.8-8.4 years) changing to an observed positive correlation in late childhood (8.6-11.7 years) and into adolescence (11.8-16.9 years). Other changes noted occurred in left hemisphere in middle prefrontal and inferior temporal areas of the brain which are reported to facilitate language abilities and higher level cognitive skills related to intelligence. It is important to note that no gender differences are reported in this study even though there are other papers that report gender differences in the development of language structures of the brain. Also, the authors do not delineate groups by specific IQ score ranges so one assumes that "average," "high intelligence," and "superior" levels all follow normed assignments according to the instrument.

In regard to the study of special populations of gifted, a structural neuroimaging study of the brains of one family with a high incidence of dyslexia and concomitant visual spatial talent provides evidence of differences in the parietal operculum (the auditory association cortex), an area of the brain involved in language processing (Craggs, Sanchez et al., in press). Though this study is conducted within one family, it suggests a correlational relationship between the presence of dyslexia, superior nonverbal performance IQ, and atypical development in this area of the brain.

So, there are potential bridges after all. Or, are there yet? These studies provide insight into the individual differences we observe between children whether they are deemed gifted or not. But does it suggest change in how we teach them? As gifted educators, we already know that the brains of these children are extraordinarily plastic. We see it in how quickly they assimilate knowledge, in the breadth and depth of their memories, or in their performance within the specific domain or skill where they display expertise. The one potential change I can foresee is that this may be counter-evidence for a teacher who is unwilling to differentiate for a young gifted student, or a school district who will not allow children below a certain age to take advanced coursework because their brains are not ready to handle the complexity and abstraction. Beyond that, however, we still need to wait for science to unearth the functional templates associated with typical and atypical developmental function.

The last several months I have engaged in a series of conversations on two continents with scientists and educators who are trying to delineate meaningful and complimentary research areas between mathematics education and cognitive neuroscience. This exercise is not trivial. There are vocabulary differences, the metrics do not scale to one another, and the lab environment and the classroom (and the types of thinking that occur in each one) are two different places and impact thinking in different ways. While blueprints for the bridges are being sketched, it is also important to remember that the river over which this bridge will cross varies in size depending on the geography and location of the crossing-over point. If the bridges are barely discernable to the research community and the foundations are in process of being laid, then policy makers, classroom educators, and professionals in gifted education must continue to garner enthusiasm, but temper it wisely whilst the bridge is still under construction. After all, we want the bridge to meet the other side before we send people on the walk over. ❖

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A Discussion of a Book Review

Book Reviewed: Equity and Excellence in American Higher Education, by William G. Bowen, Martin A. Kurzweil, & Eugene M. Tobin, Charlottesville: University of Virginia Press, 2005.

Book Reviewed by Richard Rothstein

Article by: Dona Matthews, Hunter College, The City University of New York

We don't often see economic policy advisors cited in gifted education journals, but I'd like to draw your attention to the work of Richard Rothstein. He is a research associate of the Economic Policy Institute in Washington, and currently a visiting professor at Teachers College, Columbia University. From 1999 to 2002 he was the national education columnist of The New York Times. He is the author of *Class and Schools: Using Social, Economic and Educational Reform to Close the Black-White Achievement Gap* (Teachers College Press, 2004). He is also the author of *The Way We Were? Myths and Realities of America's Student Achievement.* (1998). Other recent books include *The Charter School Dust-Up: Examining the Evidence on Enrollment and Achievement* (co-authored in 2005), and *All Else Equal. Are Public and Private Schools Different?* (co-authored in 2003).

Rothstein recently gave a talk at Hunter College about his perspective on the current government's promise to close the achievement gap in education by focusing on school reform. He argued that this promise is dreadfully unfair to educators, that the government has made a dangerous and unrealistic promise that cannot be kept, that there are too many other factors affecting children's opportunities to learn, factors that start long before children get to school, and that continue through the elementary and later years. He stated that we are offering false hope and setting up expectations that educators alone can not meet. If we really want to close the education gap between Blacks and Hispanics and Whites, he argued, we have to make sure that early and ongoing opportunities to thrive and to learn are equalized. We will not be able to close the achievement gap unless we do something about the poverty, stressors, access to health and dental care, available resources, early learning experiences, family structure, and cultural attitudes that underlie the achievement gap.

In the January-February issue of the Academe magazine, Rothstein reviewed *Equity and Excellence in American Higher Education,* by William G. Bowen, Martin A. Kurzweil, and Eugene M. Tobin (Charlottesville: University of Virginia Press, 2005). I retrieved it on March 24, 2006 from http://www.epi.org/content. fm/web features_viewpoints_equity_and_excellence

Although he described *Equity and Excellence in American Higher Education* as "important," he had some serious criticisms of it, particularly that they emphasize the importance of school reform, while underplaying the prior necessity of socioeconomic reform, "reinforcing the flawed conventional view that schools, if only run properly, could generate classless outcomes even when students come from highly stratified backgrounds."

Rothstein makes another point that is usually not mentioned in education at all, or applied to gifted education, and that is political dynamite: "Mobility must have losers as well as winners," he states. "Expanding the number of low-income students attending elite colleges requires displacing some high-income students who currently get those spaces. Without a system that makes it politically, socially, and economically acceptable for affluent children to lose in this competition, it is hard to see how a 'thumb on the scale' for poor children can overcome middle-class resistance or sabotage." This is a serious factor to consider for those of us in gifted education who care about diversity and equity. When gifted education is conceived as a zero-sum game, involving a limited number of spots in a limited number of programs, we can predict that there will be loud and powerful opposition to increasing diversity and equity. ❖

(Introduction - continued from page 1)

forward with planning the first issue. Subsequently, the membership of the Publications Committee changed to include several new members: Dona Matthews, Robin Kyburg, Leigh Kupersmith (ex-officio as the managing editor), and me. Target dates were set for post-AERA and post-NAGC issues each year, and we began to solicit contributions. Although a few articles fell through, Layne Kalbfleisch was willing to submit a lead commentary that she had recently published, in a different form, on a cognitive neuroscience blog. The topic is provocative, interesting, and relevant, and we appreciate Dr. Kalbfleisch's contribution to this new journal. ❖

How People Learn: Brain, Mind, Experience, and School: Expanded Edition

By John D. Bransford, Ann L. Brown, & Rodney R. Cocking , Editors, Washington, DC: National Academy Press

Review by: Dona Matthews, Hunter College, The City University of New York

How People Learn: Brain, Mind, Experience, and School was conceived and written by the Committee on Developments in the Science of Learning of the National Research Council. This committee at the time of writing was composed of several of the most senior scholars involved in teaching and learning, including the three editors of this volume (John Bransford, Ann Brown, and Rodney Cocking), as well as fourteen other equally notable scientists, such as Rochel Gelman, Robert Glaser, Roy Pea, and Barbara Rogoff, to choose but a few. It was born of the Committee's collective concern about how slowly important new research findings on learning, brain development, and teaching are being translated into educational practice in schools.

The first book in the series was published in 1999, and an expanded edition of that book was published in 2000. Since then, several others have been published focusing on how students learn history, mathematics, and science in the classroom. Although not specifically targeting gifted education, the series is invaluable for people interested in understanding how giftedness develops and how to support gifted development in schools.

Bringing together a high level of theoretical and empirical work in developmental psychology, cognitive psychology, neuroscience, educational psychology, and other fields, the authors demonstrate a remarkable convergence of knowledge in some areas, such as the tremendous importance of early experience in development. They also identify areas where our collective knowledge to date is shaky or nonexistent, suggesting caution with respect to many of the products on the market that are loosely based on emergent findings.

The authors share theories and insights from widely disparate and up-to-the-minute scientific findings in language that is accessible to educators, making useful inferences and practical connections from what we are learning about cognitive and neural development to classroom activities and attitudes. They provide thoughtful discussions of topics such as transfer of knowledge across domains, which they describe as being facilitated by explicit metacognitive supports; and technology's role in teaching, which they caution about romanticizing, and also show as useful in bringing curricula based on real-world problems into the classroom, providing scaffolds for learning, enhancing opportunities for two-way conversations between teachers and students, supporting reflection and revision, building local and global communities, and expanding opportunities for teacher learning.

They challenge many traditional instructional practices, and offer specific recommendations to educators, such as ways to encourage student engagement in learning, and pathways to expertise. They highlight three findings from the disparate fields of research that they collectively draw on: "(1) Students come to the classroom with preconceptions about how the world works. If their initial understanding is not engaged, they may fail to grasp the new concepts and information that are taught, or they may learn them for purposes of a test but revert to their preconceptions outside the classroom." (p. 14) Modeling an approach to implementing this recommendation, the authors consider widely-held misconceptions about learning and the brain. They warn against fads such as teaching separately to the left and right hemispheres of the brain (the hemispheres are much more functionally integrated than previously conceived), or seeing the brain as growing in holistic "spurts," with attendant stage-related educational imperatives (there is significant evidence instead that brain regions develop asynchronously).

The second key finding: "To develop competence in an area of inquiry, students must: (a) have a deep foundation of factual knowledge, (b) understand facts and ideas in the context of a conceptual framework, and (c) organize knowledge in ways that facilitate retrieval and application" (p. 16). This finding emerges in many of the approaches to gifted education, and has been extensively developed and investigated by VanTassel-Baska and colleagues at the Center for Gifted Education at the College of William and Mary (e.g., VanTassel-Baska & Stambaugh, 2006).

The third finding is that "A 'metacognitive' approach to instruction can help students learn to take control of their own learning by defining learning goals and monitoring their progress in achieving them" (p. 18). They describe ways of fostering many of the most effective metacognitive strategies that are used by experts, such as predicting outcomes, explaining to oneself, noting failures to comprehend, activating background knowledge, planning ahead, and apportioning time and memory.

The book concludes with a discussion of future directions for the science of learning, providing suggestions for research that promises to increase the impact that classroom teaching can have on students' learning. Among other recommendations, they advocate using the principles they have identified as a "lens through which to evaluate existing educational practices and policies" (p. 251), conducting collaborative research in teams that combine "the expertise of researchers and the wisdom of practitioners" (p. 252), and expanding the study of classroom practice. ❖

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AERA Conference Highlights
San Francisco, California, April 7 -11, 2006

Michael S. Matthews, 2006 SIG Program Chair

At the 2006 Annual Meeting of the AERA in San Francisco, our SIG was allotted sufficient program slots to accept 34 of the 68 submissions we received. All sessions went well, and assistant program chair Cheryll Adams and I were quite pleased with the high quality of all of the presentations we were able to accept.

The SIG business meeting featured an invited presentation on effect sizes by noted authority Dr. Bruce Thompson, Distinguished Professor and Distinguished Research Fellow at Texas A&M University. Dr. Thompson's engaging presentation was well received by a standing-room-only crowd. His talk was followed by a panel discussion addressing the status of effect size reporting in gifted education research. Although there clearly has been progress in this respect over the last ten years, this important information is not yet present in all of the studies where it should be included. We hope that the presentations in this session have raised researchers' awareness of how and why effect size reporting is important.

Cheryll Adams is now our SIG Program Chair for the 2007 Annual Meeting in Chicago, and she is preparing a great program for next year's annual meeting. I look forward to seeing you there! ❖

Review of Gifted IQ: Early Developmental Aspects: The Fullerton Longitudinal Study

Matthew Makel, Indiana University

Typically, research provides new information or a new perspective to a given paradigm. However, occasionally, a study flips that paradigm on its head. That is when you've found something special. One such study can be found in *Gifted IQ: Early Developmental Aspects: The Fullerton Longitudinal Study* (Gottfried, Gottfried, Bathurst, & Guerin, 1994). Whereas most research on gifted students occurs after children have been labeled and begun participating in special programs, *The Fullerton Longitudinal Study* (FLS) investigates the developmental course prior to gifted identification.

Using an array of developmental, cognitive, and behavioral measures administered at six-month and then annual intervals, the FLS began when participants were one-year-old infants. Parents were also asked to rate their children's performance and abilities. At age 8, children were given the Wechsler Intelligence Scale-Revised and determined to be gifted or nongifted. The investigators then retrospectively compared group differences across the measures they had been collecting in real-time for the previous seven years. At no point of the data collection were participants notified by the researchers of the results of any measures or of gifted status. Thus, the FLS was an entirely pre-identification study and eliminated potential social and cognitive effects due to the label and participating in a program for the gifted.

Gottfried et al. found that cognitive performance differences appeared as early as 18 months. Gifted participants generally performed higher than did nongifted participants. Further, parents of gifted youth rated their child's performance higher than did the parents of nongifted participants. Moreover, the authors found no differences in social life, and behavioral or emotional problems between the two groups, but gifted students tended to provide more solutions to hypothetical social dilemmas. Additionally, parents of gifted children provided more enriching and stimulating environments (e.g., more books in the home). However, as the authors noted, the parent-child relationship is bidirectional; youth help shape their environment by requesting and reacting to parent actions (e.g., requesting more books in the home).

The FLS continues today, now tracking participants into adolescence and focusing on motivation as well as parent-child relations. Longitudinal studies as comprehensive, well written, and organized as the FLS are few and far between, but appreciated all the more when they are found. Well worth the read (or reread), this marvelous book forms a solid foundation for understanding the developmental course of gifted children prior to identification. ❖

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