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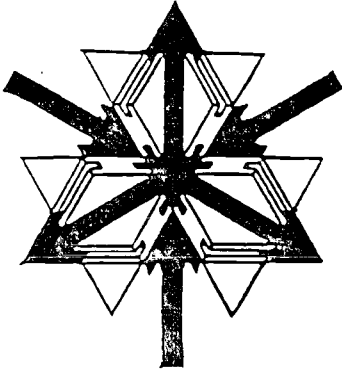
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## ABSTRACT

Twenty-two abstracts of papers presented at a symposium on the psychological development of gifted children comprise this document. Abstracts typically include the title of the paper; the author's name, title, institutional affiliation, location, telephone number, and electronic mail address; and a summary of the paper ranging from a short paragraph to a full page in length. The papers cover the following topics: development of talents, technology, and interest-motivated learning; the lives of gifted adults; E. Gibson's human behavior hallmarks applied to gifted preschoolers; needs of gifted children; analysis of the childhoods of William James, Teddy Roosevelt, Rabindranath Tagore, and Jawaharlal Nehru; overlapping characteristics and differential diagnosis of attention deficit hyperactivity disorder; music in early childhood; a model of identity formation in the gifted individual; a longitudinal study of graduates of academically gifted and talented programs; the impact of the Kansas Regents Honors Academy on secondary schools; social influences on creative individuals; maternal scaffolding and the precocious emergence of symbolic play in infants; children selected for gifted programs through an alternative assessment procedure; the "Discover" curriculum model (authentic problem solving in multiple intelligences); following highly and exceptional gifted children through the early school years; in-progress studies of development in high-ability individuals; perceptions of competence and motivation of gifted children; intimacy, passion, and commitment as components of eminent achievement; the emergence of an artistic and creative identity; an intensive summer program for academically talented adolescents; a measure of flow experiences; and cognitive giftedness and ethical development. (DB)

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The Sixth Annual  
Esther Katz Rosen Symposium  
on the  
Psychological Development  
of Gifted Children

***FROM GREAT POTENTIAL TO  
AMAZING PERFORMANCE:  
FACTORS THAT MAKE  
A DIFFERENCE***

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Abstracts of Selected Papers

University of Kansas

Lawrence, Kansas

September 20 - 21, 1996

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**THE DEVELOPMENTS OF TALENTS, TECHNOLOGY,  
AND INTEREST-MOTIVATED LEARNING**

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This session will synthesize a wealth of approaches aimed at the development of talent through the use of interest-motivated learning strategies that are facilitated by a wide variety of technologies, many of which are only just now available to us. Three aspects describe the plan: (1) what we know and continue to learn about the principles of talent development; (2) the role technology plays in providing a context wherein these principles can be applied; and, (3) an overarching appreciation for the value of creating an optimal match between characteristics of the learner and important educational variables. A program of research through service with academically promising migrant students, begun six years ago and continuing into the present, will provide empirical evidence regarding the actualization of this innovative design to help individuals find and express their talents.

**STORIES FROM THE HEART:  
GIFTED ADULTS SPEAK TO GIFTED STUDENTS**

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The presentation will summarize an ongoing qualitative study of the lives of gifted adults, as told by the persons who know them best--their spouses, their best friends, their adult children. Three case studies will be presented in detail. Case #1 is a life review of a college professor as told through the eyes of his adult son, a lawyer and lifelong student of his dad. Case #2, told from the perspective of the man's wife, tells of a chemist's struggle to create and to be accepted as a person of worth. Case #3, presented through the spoken word of the individual's best friend, summarizes the accomplishments of an administrator in education, career, family; and of the importance of a soulmate in life.

Themes to be reflected on will include the importance of faith, the pain and the pleasure of achievement, the support of family and friends, the need for true peers, and the everyday introspection of the gifted person. Implications for use with younger, gifted students will be made.

**GIBSON'S HUMAN BEHAVIOR HALLMARKS:  
A KEY TO ILLUMINATING THE GIFTED POTENTIAL  
IN PRESCHOOLERS' DIVERSE RESPONSES**

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Understanding preschoolers' behaviors and response complexity to objects, people and events is critical for identifying and nurturing gifted potential, especially in children whose experience has differentially affected the quantity and quality of intellectual and social responses they make to various stimuli in the school and home setting. Eleanor Gibson (keynote address to the 1993 Convention of the American Psychological Society), suggested that there is just one way to understand human behavior and that is to take a developmental approach, stating "there is no typical or standard moment of maturity;...we gain our understanding from change and becoming" (Gibson, 1994, p. 71). She proposed organizing the study of behavior around five human behavior hallmarks, demonstrating that each is present in rudimentary form early in life.

Applying these hallmarks to the behaviors we have observed in precociously developed young children -- agency, prospectivity, flexibility, communicative creativity and retrospectivity -- has markedly extended our knowledge about how emerging giftedness might look in children from diverse family backgrounds, demonstrating the process of "becoming" in these children's development. Individuality of the children's responses is respected and identification of unique aspects of the child's potential assists educators in more individualistic targeting of appropriate nurturance, especially for children whose potential might otherwise have been overlooked.

A summer program conducted over the past 9 years for preschoolers especially bright for age has provided extensive data on the responses of these 3- and 4-year-old children. Content preferences, information gathering modality preferences, problem solving style (tempo, verbal/kinesthetic/ sensory/intuitive, etc.), peer communication style and adult interaction style were collected from parents, teachers, assessment records, and researcher observations. Data demonstrated numerous aspects of the ecological and environmental influences we propose promote different types and degrees of precocious development between children. Using Gibson's hallmarks of human behavior lent organization to the variety of data obtained, and illuminated the possibilities for the progressive development of extraordinary competence.

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## THE NATURE AND NEEDS OF GIFTED CHILDREN

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Using Dabrowski's Theory of Positive Disintegration as a conceptual framework, this paper synthesizes information about the nature and needs of gifted children based on the authors' eleven years of research and work with gifted young children. These years of work with gifted children have given the authors' insights into the cognitive, emotional, and physical development of young gifted children. This paper attempts to conceptualize this knowledge into a form that will be useful to others in the field.

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**FROM GREAT POTENTIAL TO AMAZING ACHIEVEMENT:  
ANALYSIS OF CHILDSHOODS OF WILLIAM JAMES, TEDDY ROOSEVELT,  
RABINDRANATH TAGORE, AND JAWAHARLAL NEHRU**

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**Objective:** To analyze childhoods of William James, Teddy Roosevelt, Rabindranath Tagore, and Jawaharlal Nehru to derive implications for gifted education.

**Modes of Inquiry:** The four chosen individuals were born in the 19th century. James (1842-1910) is the oldest and Nehru is the youngest (1889 - 1964); Tagore (1861 - 1941) is 3 years younger than Roosevelt (1858 - 1919), but lived 22 years longer. Roosevelt and Nehru are politicians; James and Tagore are writers. James and Roosevelt are from the United States; Tagore and Nehru are from India.

The early portraits, art works, cartoons, childhood works, significant family members, and turning events of their lives are analyzed to *trace* how their profound achievements in life can be linked to childhood precocity.

**Perspective:** It is difficult to ascertain what factors in childhood help achieve greatness in adulthood and beyond. Plato recognized that many famous parents often raised ordinary or even infamous children. On the other hand, countless individuals who made remarkable contributions to art, literature, science, medicine, and politics often came out of adverse or hostile personal circumstances. Also, many did not have formal education, or at least, not in the domain in which they demonstrated unusual gifts.

**Results and Point of View:** Apart from the extreme cases where individuals from extremely disadvantaged background achieved greatness, childhoods of James, Roosevelt, Tagore and Nehru show that their families provided them either fortune or role-models or both. Their schooling, in fact, was supplemented by private tutors and other forms of learning experiences at home. Although they were not among the top students in class, they were known to peers and teachers as being active (often naughty), daring, creative, insightful, and good looking. The study reminds me of an old Bengali proverb that how students do in school as well as in life itself largely depends on *what* they get at home as children.

They demonstrated superior gifts in language even in childhood. Their writings from age 7 to 15 reflect interesting themes, clarity of thought, lucidity of expression, larger vocabulary, and wit. It seems that superior ability in language is fundamental, for it is often explained as the root from which other forms of intelligences are acquired. For instance, despite being shy and physically weak as a child, Roosevelt developed exceptional social and kinesthetic abilities as an adult; Nehru demonstrated originality in writing, classics, and biology; Tagore became a legend in art, music, astronomy, and in all the branches of Bengali literature and culture; in addition to being a pioneer in psychology and philosophy, James was also an artist, physiologist, and had intimate friends in many lands.

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**PEELING THE ONION:  
DELINEATING OVERLAPPING CHARACTERISTICS  
AND DIFFERENTIAL DIAGNOSES FOR ADHD**

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This session discusses an ongoing project to examine the key distinctions among overlapping characteristics which are often confused with ADHD (Cramond, 1990; Lerner, Lowenthal, & Lerner, 1995; Lovecky, 1990; Silverman, 1993; Webb & Lattimer, 1993). The project is looking at five types of people highly gifted, visual spatial learner, overexcitable, creative, and learning disabled and how their behaviors might be confused with three major characteristics of ADHD: inattention, hyperactivity, and impulsivity. For each type of person and for each ADHD characteristic we are looking at the following components: overt behavior, motivation and volition, temperament and personality, internal cognitive functioning, feeling states, energy levels, sociability, and belief systems and philosophy. It is hoped that this detailed analysis will produce possible distinguishable characteristics which would assist in differentiating between ADHD and other modes of functioning. An example of this analysis and the potential for future research will be discussed.

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## LEARNING THE LANGUAGE OF MUSIC IN EARLY CHILDHOOD

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Many factors affect acquisition of language in early childhood. This poster session moves from examining specific attributes, talents and experience of students, parents and teachers conducive to rapid and optimal learning to the special challenge of teaching the language of music to a very young gifted child.

Student attributes include interest, attention, memory and staying power. Parent attributes include intuitive attention to a child's signals, and mindful persistence in cultivating them. Teacher attributes include the power to inspire, to analyze and break down problems into smaller components, attention to detail, patience, sensitivity and understanding.

Talents conducive to rapid and optimal learning in students include several modalities of memory: visual, auditory and kinesthetic, and flexibility in integrating new information. Specific factors encouraging optimal communication in teaching young children include the ability to give clear verbal instruction and demonstration, an open attitude and understanding of individual temperamental and developmental differences, and maintenance of strict standards. Parents provide the "glue" by their presence & support to the children's efforts, providing the constant reminders necessary until the child develops self-control.

Student experiences contributing to successful learning and exceptional performance include early exposure, learning by multiple modalities, in short segments and with immersion. Parents provide encouragement with their consistent monitoring of the child's progress. A gifted teacher experiences the joy of being a catalyst that communicates expert mastery through empathetic explanation and vivid imagery.

Teaching a gifted student presents an additional challenge and reward because the process of transmitting information is accelerated as well as multidirectional. The "catalyst" may find itself converted in the process of transformation. Teaching the very young is a specific challenge because the instruction itself may have to be modified to fit into each child's "world view" and event-specific vocabulary.

**IDENTITY FORMATION AND THE GIFTED:  
A MODEL FOR INTERVENTION AND DEVELOPMENT**

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Many gifted people struggle with their giftedness; what it means to be gifted; and how to develop that potential. Counselors and related professionals have limited instruments or models of intervention to address these concerns. With this limitation in mind, this author has developed a model to assess and deliver interventions that explore and strengthen the identity of gifted people, in turn enhancing performance. In this model, identity is explored as the fundamental principle contributing to the development and execution of potential in the gifted person. Developed originally for use when counseling the gifted, the model transfers to a variety of processes such as curriculum development, educational programming, and human resource interventions. This model becomes a concrete and strategic way to bridge the abstractness of identity formation with the pragmatics of developing gifted potential.

With this model, Identity becomes the base line for intervention. The author has illuminated 12 systems that impact identity formation and how each of those systems interact with the process of identity formation and the construct of giftedness. Through assessing the relationship between those variables, interventions are tailored. The work presented here allows participants to explore the impact their clinical and educational interventions have on enriching the gifted person's development. The author encourages participants to investigate this work and participate in its evolution. Those interested will receive a demonstration, handouts, and follow up procedures to evaluate its effectiveness in practice.

## DEVELOPING A LONGITUDINAL STUDY OF GRADUATES FROM ACADEMICALLY GIFTED AND TALENTED PROGRAMS

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This presentation will describe a follow-up study of K-12 graduates from Louisiana's academically gifted and talented programs to help resolve questions associated with determining whether program efforts have facilitated students' full development. The largest of the state's programs was first initiated in 1976-77 with 176 students and now has grown to over 3,500 students in 1995-96. Since the mid-seventies, it is estimated that there have been more than 20,000 K-12 students participate in this program's special offerings sometime during their school careers, and approximately 300,000 students have participated statewide in gifted and talented programs during the same period. A previous study of this program evaluated students' developmental experiences, program impact, and teacher effectiveness associated with current educational participation. While this study generally revealed positive outcomes, longitudinal questions concerning later-in-life performance have become even more important to the search for validation and long-term impact and benefit.

Life span research in the field of gifted and talented education is possible in Louisiana where two decades of active program development, stable state laws and regulations, and adequate funding have existed for gifted and talented education. The challenge of the current study is to ask the definitive questions for considering whether students' "great potential" in K-12 school settings have manifested themselves in "amazing performance" as adults. A set of questions will be selected and approved by a statewide committee representing all large programs. Members of this review committee include program directors, teachers in gifted and talented programs, parents, current and past students in the programs, and university faculty. Data on several thousand graduates will be obtained from school records, individual surveys, personal interviews, and focus groups over an extended period of time.

The poster presentation will describe the work in progress to date with a review of the most important follow-up questions under consideration. Selected performance factors will be analyzed and reviewed historically. Active involvement will be encouraged of all participants in the session concerning the opportunity and challenges found in this study will be encouraged.

**THE IMPACT OF A STATEWIDE HONORS ACADEMY  
ON SECONDARY SCHOOLS**

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The Kansas Regents Honors Academy has successfully educated gifted high school juniors for eight years. Its impact on the gifted programs in the state is not clear. This paper explores several possible reasons for this situation and offers suggestions for extending and enhancing the impact of the Academy.

## **SOCIAL INFLUENCES ON CREATIVE INDIVIDUALS: A LIFE-SPAN DEVELOPMENTAL PERSPECTIVE**

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### **Introduction:**

The present research is aimed at extending our knowledge of the development of creativity by integrating a life-span perspective with a study of the social influences affecting eminent adults. Notions of creative people typically engender images of an isolated individual quietly working alone in a dark laboratory or studio. Creativity researchers have recently begun to challenge the extent to which this image adequately represents the circumstances in which creative work is produced. In view of this, the present investigation sought to identify some of the ways relationships and social interactions are relevant to optimal development, creativity and exceptional achievements through the life span.

### **Research method & analysis:**

Retrospective biographical data were collected via a video-taped interview that lasts approximately two hours. The semi-structured interview protocol was designed to collect relatively equivalent information from contemporary eminent individuals. The sample is comprised of approximately seventy eminent and creative adults over 55 years old. Subjects include men and women from one of four areas of expertise including Natural Science, Social Science, Arts and Humanities, and Business, Media and Politics.

### **Results and Discussion:**

The findings will be illustrated via excerpts of the narratives and general trends among these data. The narratives of eminent individuals suggest that during the life course different combinations of interpersonal relationships are beneficial for developing in creative directions. The findings will be organized in terms of the relevant social influences that were associated with each stage of the life cycle. It is also the case that an individual's needs and interactions with others vary depending on their level of development, gender, and professional discipline. Among the significant social influences recognized were the intellectual values communicated by parents; the professional ethics and thought processes modeled by mentors; the personal and professional support a spouse provided; and the intellectual stimulation and expertise afforded by colleagues and young people in the field. Moreover, an examination of individual cases revealed that a mentor's work habits and ethics often become embedded in those of the apprentice which are, in turn subsequently transmitted to young members of the field.

### **Summary and Conclusion:**

This investigation alerts us to the importance of the social conditions that foster exceptional creativity within a field. Among the narratives, one finds again and again that ideas, work habits and enduring doctrines originate and develop through interactions with others. The majority of those interviewed received substantial external support during both childhood and adulthood. This investigation demonstrates how specific educational experiences and interpersonal relationships influenced the lives and careers of eminent adults. Along these lines, while it is commonly thought that one contributes to the transformation of domain through specific works such as musical pieces, discoveries, books, theories or inventions, this study highlighted another mechanism through which the advancement and transformation of a domain occurs. Extraordinary individuals contribute to the transformation of domains through pedagogical relationships in which ideas and behavior are transmitted from one generation to the next.

**GIFTED DEVELOPMENT IN INFANCY:  
A STUDY OF MATERNAL SCAFFOLDING  
AND THE PRECOCIOUS EMERGENCE OF SYMBOLIC PLAY**

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In recent years, studies of maternal scaffolding have appeared more frequently in the literature as Vygotskian theory spawns an ever-growing number and variety of empirical initiatives. A central tenet of Vygotskian theory is that children's cognitive development takes place as social and language interactions initially occurring between minds become internalized by the child and begin to structure cognition intra-psychologically. Vygotsky posits that the language climate within which children develop strongly influences the level of conceptual thinking they attain. Thus, language environments containing varied and complex concepts can be expected to support varied and complex modes of thought.

Investigations of mother-toddler interactions in structured play situations reveal distinctly different scaffolding styles in dyads involving cognitively and linguistically normal children as opposed to those involving cognitively normal hearing impaired children with language delays. To date however, no research has appeared in the literature investigating scaffolding processes in mother-toddler dyads where children exhibit advanced cognitive development.

This study explores the symbolic play of toddlers (16-17 months) within the context of mother-child interactions. Nine mother-child dyads comprised three groups, defined by child characteristics: (1) hearing impaired (2) normal hearing (3) normal hearing and cognitively advanced (as defined by the precocious emergence of symbolic play).

The dyads were videotaped in structured play settings designed to elicit symbolic play. Variables included children's levels of symbolic play as reflected through decontextualization, decentration, planning and sequencing, mother's levels of symbolic play, and the general quality of the conceptual framework within which the interactive play occurred.

Results indicated that children in the advanced group were significantly different from the other two groups in levels of decontextualization and planning. Lower levels of decentered behaviour were associated with hearing impairment. Mothers of children in the advanced group demonstrated higher levels of symbolic play. Their interactions with their children were characterized by higher levels and greater frequencies of abstract transformations which were embedded in conceptually complex orchestrations of play activity.

**CHILDREN SELECTED FOR GIFTED PROGRAMS THROUGH  
AN ALTERNATIVE ASSESSMENT PROCEDURE:  
WHAT DO THEY AND THEIR PARENTS THINK ABOUT THEIR ABILITY?**

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This proposal describes a work in progress. Through the use of an alternate identification system we have located gifted students who were not found in a traditional identification system. These children attend two schools which include a high percentage of minority students, in low income sections of a city of approximately 40,000 people. When we provided an opportunity for parents to visit the site for a special gifted program and when we scheduled parent meetings to discuss the proposed program and future options for the children, parent attendance was minimal. Because we believe that parent involvement and support are elements which increase student achievement, we want to know how to increase that parent support and involvement. What feelings or beliefs are interfering with greater participation? We are considering individual parent interviews to gather information.

We want to know how the children perceive themselves as learners and what their ambitions and aspirations are. We are considering the following steps.

- a. assessing the students' self-concept in various areas (e.g. academic, social) questioning the children regarding their ambitions and aspirations
- b. interviewing the parents to determine their ambitions and aspirations for their children
- c. determining whether there is a relationship between a and b above
- d. carrying out an information and enrichment program (available to both parents and children) outside the school.
- e. at the end of the year, repeating a and b above to determine whether there are changes

We would appreciate the opportunity to talk with others who have successfully gathered information from similar students and/or their parents.



**THE DISCOVER CURRICULUM MODEL:  
ENGAGING STUDENTS IN AUTHENTIC PROBLEM SOLVING  
IN MULTIPLE INTELLIGENCES**

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Children attending American public schools in the 1990s often are taught by the same methods common in the 1890s: lecture, reading, and recitation. Too often, teachers rely on textbooks as the primary source of information and expect all children to learn the same concepts or skills in exactly the same ways. For many children who learn through active experiences these methods do not afford learning opportunities. The evidence from cognitive research demonstrates a need for major curricular reforms to increase student engagement.

The DISCOVER Assessment Model, developed by C. June Maker, Judith A. Rogers, and Aleene B. Nielson has proved to be an excellent alternative for identifying giftedness among children from underserved populations (Maker, Nielson, & Rogers, 1994). Once strengths have been identified, students also must have opportunities to develop and use their strengths in learning. The DISCOVER Curriculum Model provides a structure for teachers to use in planning interdisciplinary units that incorporate multiple intelligences, multiple problem types, a variety of information sources, and modifications recommended for gifted students (Maker & Nielson, 1996). Using complex content and interactive processes, students develop understandings, construct new knowledge, and create products valued in diverse cultures. Significant curricular changes are made to allow all students a choice of engaging activities in areas of interest and intellectual strength. Classroom environments are transformed into interactive workshops with tools of varied intelligences readily available. Collaborative groups are formed as needed for specific projects, emphasis is placed on openness and independence, and students have varied ways to acquire and transform information into knowledge. Learning goals, cooperatively designed by individuals or small groups, challenge students to solve problems and create products within their own zones of proximal development.

Pilot projects, completed as part of the research on the DISCOVER Assessment Model, show that students in classrooms of high implementers of the DISCOVER model are more engaged in substantive learning, show greater achievement gains, and improve in social interaction. The research design included several elements: 1) preassessment and postassessment of students to identify strengths and growth, 2) intensive consultation with teachers in the development of curricula to meet students' specific needs, 3) a series of classroom observation by members of the DISCOVER team, and 4) interviews with teachers and students to assess their perceptions of change. Analyses of the relationships between level of teacher implementation of the DISCOVER approach and student growth were conducted and comparisons were made between type of school setting, level of teacher implementation of the DISCOVER curriculum modifications, and student growth. Analyses also were made to discern gender differences, if any, at the initial assessment or in levels of growth from pre- to post assessment.

During assessments, high competence in spatial intelligence was found more frequently among boys than girls in all classes and ethnicities. High competence in written stories was found more frequently among girls. No gender or ethnic differences were found in logical-mathematical intelligence (tangram problems and mathematical problems) or in oral storytelling. At postassessment, greater growth was found among students of teachers identified as high-level implementers of the DISCOVER Curriculum Model than among students of middle-level or low-level implementers.

Results of the research conducted during the DISCOVER III project indicates that identification of student strengths in multiple intelligences in tandem with a curriculum that allows each child to learn through strengths and demonstrate their proficiency in varied ways has a synergistic effect. Students are more engaged in learning and, as a result, make greater gains and develop higher levels of competence in almost all intelligences.



## FOLLOWING HIGHLY AND EXCEPTIONAL GIFTED CHILDREN THROUGH THE EARLY SCHOOL YEARS

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Parents of gifted children, especially highly and exceptionally gifted children are often the first to be aware of their children's atypical development and unusual interests. Researchers have found that the information, carefully collected from parents, can provide information as valuable as that provided by tests (Gottfried, Gottfried, Bathurst & Guerin, 1994) and can be predictive of later performance in school (Sattler, 1988). While parents are often aware of these qualities in their children during the early elementary years, schools less often make deliberate efforts at identification and program development for children this age. The question arises, what happens to young children whose parents, when aware of these developmental differences in their children, seek out educational assistance for their children.

The paper will outline a research plan for exploring the development of these children, who appear, in early childhood to have unique educational needs. The plan will include several of the techniques of individual assessment that have been useful in the last few years but will be expanded to include an exploration of the change in the children's abilities and interests over the years, as well as an exploration about the school's response to that child. Some researchers have found that for children of considerable exceptionality, either in measured intelligence (Gross, 1993), academic skills, musical ability or artistic ability (Winner, 1995) there are failures in the educational systems to adapt to the children and provide for their needs. Following identified children closely, for several years, as they progress through varied education experiences, may help clarify which educational responses do and do not facilitate the development of these children in academic and emotional domains. The work will need to include multiple case studies, combined with interview of teachers and parents, augmented by in-school observations. Issues to be addressed will include frequency of contact with the children, parents and schools, the type of assessment scheme applied to the school and the roles which children, parents and teachers will be expected to have.

Gottfried, A.W., Gottfried, A.E., Bathurst, K., & Guerin, D.W. (1994). *Gifted IQ: Early Developmental Aspects: The Fullerton Longitudinal Study*. New York: Plenum Press.

Gross, M.U. (1993). *Exceptionally Gifted Children*. London: Routledge.

Sattler, J. (1988). *Assessment of Children*. San Diego, CA, Jerome Sattler, Publisher.

Winner, E. (1996). *Gifted Children: Myths and Realities*. New York: Basic Books.

**IN-PROGRESS STUDIES OF  
DEVELOPMENT IN HIGH-ABILITY INDIVIDUALS:  
A CONCEPTUAL APPROACH AND A RESEARCH MODEL**

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The longitudinal study "Sixteen At-Risk Gifted Young Adults and Four Developmental Processes" (1995 Rosen Symposium) represents a conceptual approach and a research model that are promising for understanding the development of individuals with high ability regarding maximizing performance. The process of individuation/separation/differentiation in young adults, particularly as related to various developmental tasks over time, is an appropriate conceptual framework for examining promise and performance, and the complex research model fits the complexities involved in accomplishing those tasks. This study has looked at at-risk, high-ability high-school graduates ("at risk" on the basis of depression, trauma, family conflict, or underachievement) over four years. All initially took self- and family-assessments and then periodically provided likert-style responses to questions related to resolving conflict, gaining autonomy, developing a mature relationship, and finding direction, with narrative elaboration invited. The data is rich and complex. Ultimately, simple correlations will be conducted with various pairs of variables (questionnaire responses and assessment results), and narrative responses will be analyzed qualitatively for themes and evidence of accomplishing various developmental tasks. Of interest, when there is evidence of resolution in one area, is whether other tasks are then, or subsequently, resolved, and whether resolution of various developmental tasks is related to improved achievement.

The conceptual framework and research model are being used with three other in-progress studies as well. One, with successful adults who were once adolescent underachievers, is retrospective. Another is a four-year follow-up of a group of 153 achievers and underachievers. The third is a six-year longitudinal study of resiliency in 100 high-ability school children, looking at life events in relation to achievement. The research model offer opportunity for discovering anomalies and patterns that are often masked in statistical analysis. Findings can provide insights regarding individuals who have typical developmental tasks to accomplish, but also idiosyncratic contexts, unusual ability to bring to bear on situations, and individualistic "tempo" of development.

**THE ACADEMIC WORLDS OF GIFTED CHILDREN:  
PERCEPTIONS OF COMPETENCE AND MOTIVATION**

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Self- and others' perceptions of academic competence and motivation are recognized both as important sources of individual differences in gifted learners and meaningful considerations in designing educational programs well-matched to the needs of gifted learners (e.g., Gross, 1993; Janos & Robinson, 1985; McVey & Snow, 1988). Work representing part of a longitudinal study of the cognitive, conative, and social development of children of high ability addressed the nature of these individual differences and their stability over time. Seventeen children (8 girls, 9 boys) who have participated in the study for four years were the focus of the study. Overall, the participants rate their scholastic ability positively and see themselves as intrinsically motivated learners, perceptions shared by their parents and teachers. Most ratings are stable over time. There are notable individual differences, however, which appear to impact on achievement and have implications for understanding and educating gifted children. These differences include gender differences in motivation with more girls than boys showing low intrinsic motivation, within-subject differences in perceptions of competence over time, and differences in child and teacher ratings of motivation.

**INTIMACY, PASSION, AND COMMITMENT:  
TRIANGULAR COMPONENTS OF EMINENT ACHIEVEMENT**

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The purpose of this presentation is to describe Pyryt's (1993a) triangular model of eminence development, which is based on Sternberg's (1986,1988) triangular theory of love. Sternberg has proposed that the major ingredients of a successful loving relationship are intimacy (ability to interact comfortably and share feelings), passion (physical passion), and commitment (decision to have a long term relationship and perseverance in the face of frustration). Predictions about relationships can be made about the nature and viability of a relationship based on the perceived presence of the three ingredients.

Pyryt (1993a, 1993b, 1996) has applied these concepts to the development of eminence, creativity and leadership. In terms of eminence potential, a person who only develops intimacy is predicted to be a researcher focussing on the psychology of eminence. A person with only passion is predicted to constantly switch focus and not achieve eminence. A person who only has commitment is likely to be an industrious follower. The combination of intimacy and passion might lead to short-term commitments to particular approaches. The combination of passion and commitment is predicted to lead to cult-like fascination with a particular approach. The combination of intimacy and commitment is predicted to foster a "behind the scenes" leadership in a discipline. The triangular theory of eminence predicts that eminent achievement involves the three ingredients of intimacy, passion and commitment.

After briefly describing the triangular model of eminence, this presentation will focus on two recent developments: 1) elaboration of the model and its components in the context of Joreskog and Sorbom's (1996) LISREL approach and 2) relating this elaboration to current models of gifted education and talent development.

**A STUDY OF YOUNG ARTISTS:  
THE EMERGENCE OF AN ARTISTIC AND CREATIVE IDENTITY**

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In many ways this study concerns itself with "What ifs": What if we were to study children as they develop their talents in the visual arts? What if we do not "identify" "talented" children, but allow any child, who wants to learn about making art, participate in an enrichment program? What if we strongly support the child's involvement in self-directed learning experiences? What if we listen to what the child has to say about the art experience and being an artist and creator? What if the researcher has been an artist and teacher of art for most of her life and thereby brings a unique perspective to this investigation of the emergence of an artistic and creative identity?

Thirty-nine children, in grades two through five and currently enrolled in a private after-school art enrichment class, participated in this study of young artists. The investigation involved an open-ended discussion of the participants' long-term painting projects and experiences in the process of making art.

An analysis of the interviews revealed developmental changes in the focus of painting as well as the participants' conceptions of what it means to be an artist and what it means to be creative. An artistic and creative identity emerged from the interaction among the participants' experiences making art, reactions from the "field" (parents, teachers, peers), and a challenge-seeking attitude toward learning and the development of artistic ability. Age trends will form the basis of this visual presentation as well as a "gallery" of work created by the young artists and their comments about being an artist and being creative.

**ACADEMICALLY TALENTED ADOLESCENTS' EXPERIENCES  
IN AN INTENSIVE SUMMER PROGRAM:  
COMPARISONS WITH REGULAR SCHOOLS AND REASONS FOR ATTENDANCE**

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Each summer, many highly talented students attend residential programs on university campuses. Experiences such as these may be of great importance in the intellectual and social development of the gifted adolescent. For this investigation, we were interested in students' comparisons of their summer program experience and their regular schools, and students' reasons for attending summer programs. Participants included approximately 700 academically talented students attending Duke University Talent Identification Program (TIP) 1996 summer residential programs. Participants completed the Student Experience Survey, comparing their TIP experience to their regular school experience across several dimensions, including: level of utility and interest of coursework, coursework challenge, satisfaction with teaching, and closeness to peers. In addition, students rated the importance of several possible reasons for attending TIP. These included intellectual reasons (e.g., the chance to be challenged by coursework, the chance to focus intensely on one academic topic), social reasons (e.g., the chance to meet new people, the chance to be around people who are like you), and more experientially based reasons (e.g., the chance to try new things). Preliminary analyses indicate that students report greater stimulation from summer program coursework as compared to that in their regular schools, as well as greater satisfaction with their summer program teachers along dimensions of clarity, organization, enthusiasm, and effectiveness. Despite rating summer program coursework as more challenging and difficult than that in their regular schools, participants reported lower stress in conjunction with summer program coursework. Students rated all three types of reasons for attending the summer program as fairly important, with a tendency for social reasons to be rated slightly higher than intellectual reasons. Furthermore, the more times students had attended TIP summer programs, the higher they rated social reasons for attending. Responses will also be analyzed across gender, type of course enrolled in at TIP, and type of regular school attended by participants (e.g., public, private, private residential). Results will be considered in terms of the multi-dimensional role that academic summer programs may play in the nurturing of talent within academically talented adolescents.

**A NEW INSTRUMENT TO MEASURE THE FREQUENCY  
AND DIVERSITY OF FLOW EXPERIENCES**

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*Flow Experiences* refer to periods of deep, intense involvement in activities that challenge but do not overwhelm one's skills. As conceptualized by Csikszentmihalyi (1990), Flow integrates experiences of high but effortless concentration, intrinsic motivation, loss of awareness of self and clock time, facile responsiveness to challenge, and feelings of competence and freedom. It is typically experienced in activities that provide clear rules and feedback to performance, and permit a close calibration between challenges and skills. A growing body of research links Flow Experiences with talent development and superior mental health outcomes (Csikszentmihalyi, Rathunde and Whalen, 1993). But assessments of Flow suitable to the placement, counseling and talent profiling of individual students have yet to be developed.

The present research explores the diagnostic capabilities of one such assessment currently being developed and tested at Northwestern University's Center for Talent Development (CTD). This 2-page paper-and-pencil measure first asks respondents to list activities that provide them with specific experiences associated with Flow. These experiences are: 1) involvement and losing track of time; 2) importance; 3) self-expression; 4) competence; 5) interest; and 6) challenge. Activities are differentiated further by location "in school" or "outside of school." Respondents next are asked to list activities that combine all or most of these six attributes, and estimate how many hours per week they engage in each activity.

Data will be reported on a pilot administration of this questionnaire given to 251 gifted students who attended summer courses at the Center for Talent Development in 1995. Analyses will be presented at two levels. At the *activity level*, analyses will focus on how major academic, extracurricular and leisure activities are distributed across the six attributes of Flow, and the frequency with which academic and non-academic activities are reported as integrating these six attributes. At the *person level*, analyses will focus on links between the frequency and content of flow experiences, intellectual attitudes, motives and preferences, and performance in CTD courses. Discussion will address the potential applications of this measure to the talent identification and the improvement of student services.



# COGNITIVE GIFTEDNESS AND ETHICAL DEVELOPMENT: TAKING THE MORAL HIGH GROUND, OR SHARING THE CARING COMMON GROUND?

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Since cognitive development and ethical development have often been linked, showing advanced cognition to be associated with advanced moral reasoning (e.g., Perry, 1970; Kohlberg, 1984) and with wisdom (see Sternberg, 1990), a study was undertaken to examine the factor of morality as it impacts performance by adults with high cognitive potential. In this study, exceptionally cognitively advanced mothers of young adolescents were found to display more moral parenting behaviors than were less cognitively advanced mothers of young teenagers suggesting that morality does play a role in the use of cognitive giftedness.

A second study used a lifespan perspective to trace the path of morality over time and examined the emergence of ethical reasoning in the development of cognitively gifted adolescents and adults. Across the lifespan, gifted participants were found to be higher on morality than were nongifted participants in this cross-sectional examination. In addition, cognitively gifted people were shown cross-sectionally to increase in morality across the lifespan thus suggesting cognitive growth throughout life even among gifted people (see Worthen, in press).

In addition, the influence of gender as it might interact with cognitive giftedness and ethical development was studied. Among gifted men and women in the Terman longitudinal lifespan study of gifted people, Holahan (1984) found gifted men to be more expressive at age 70 than at age 30, and gifted women to be more assertive at age 70 than at age 30, thus suggesting later life sex-role reversal in gifted people as has been found normatively by Gutmann (1975, 1994) and suggesting older adulthood sex-role blurring, increased androgyny and increased sex-role integration as found by Sinnott (1977, 1982). Sheehy (1995) labels this developmental sequence the "Sexual Diamond" theorizing that males and females are psychologically similar during childhood, and that the genders diverge with psychosocial development in adolescence and younger adulthood, but that the sexes approach reconvergence during the fifth decade of life.

In the area of moral development, gender differences have been theorized by Gilligan (1982, 1993) and Noddings (1984) emphasizing that females use an ethic of care. Although a few studies and reviews by Walker (1984, 1986,) and Nunner-Winkler (1984) indicate no gender differences in moral orientation, numerous empirical studies provide evidence for females having a more caring moral focus than males (e.g., Barnett, Quackenbush & Sinisi, 1995; Pratt, Diessner, Hunsberger, Pancer & Savoy, 1991; Sochting, Skoe & Marcia, 1994; Stiller & Forest, 1990; Wilson, 1995). In the current study, possible gender differences in adolescent through adult cognitive development in the form of an ethic of justice and an ethic of care (see Gilligan, 1982, 1993) were examined within Sheehy's (1995) Sexual Diamond developmental paradigm. A cross-sectional examination of the Sexual Diamond theory comparing genders on the justice ethic and the ethic of care showed gender differences in nongifted participants to decrease in mid-life, thus supporting the theory. With cognitively gifted adolescents and adults, however, moral gender differences were found only when both kinds of ethics were combined. Young gifted males were significantly less moral than young gifted females while no gender differences on overall morality were found in older gifted adults, suggesting a Sexual Diamond of narrower width for gifted people.

Cognitively gifted participants in these two studies were found to be more generally moral than the nongifted participants, thus providing evidence that morality may be an important factor in the use of advanced cognitive ability. Moreover, cognitively advanced participants of both genders showed little difference between their display of a justice ethic and their use of an ethic of care. By virtue of their versatility in both taking the high moral ground of fairness and sharing the common ground of caring, cognitively gifted people may be approaching wisdom (see Cziksentsmihayli & Rathunde, 1991; Smith & Baltes, 1990), the often-elusive, oh-so-rare state of sagacity that includes both virtuousness and kindness--that is, both justice and care.

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