

## Resources

It is our choices that show what we truly are, far more than our abilities.  
 - J.K. Rowling

### Gifted Adult Study

Environmental, Familial, and Personal Factors That Affect the Self-Actualization of Highly Gifted Adults: Case Studies

Doctoral Dissertation

Introduction and Literature Review, Deborah L. Ruf, Ph.D.

Deborah L. Ruf's doctoral dissertation is the case study analysis of 41 highly gifted adults. It is too large to reproduce on this web site, but the introduction, literature review, and conclusions follow. A literature review in itself gives tremendous background to the historical aspects of the subject being studied and might be helpful to some readers seeking answers regarding giftedness. Actual quotations from some of the subjects in the study are presented in the *Advanced Development Journal* article, "If You're So Smart, Why Do You Need Counseling?"

This is only the first three chapters of the actual dissertation. If you are interested in purchasing an entire copy, including the case studies themselves, the cost for the bound copy and shipping and handling is \$35; a PDF file copy is available for \$15. You may make the credit card and mailing arrangements by using the following PayPal links:

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### CHAPTER I

#### INTRODUCTION AND OVERVIEW OF THE RESEARCH

*Giftedness implies an advanced ability to construct meaning in the context of experience, including an enhanced capacity to think abstractly and to respond emotionally to abstract concepts used in the interpretation of experiential phenomena. Giftedness permeates the whole of one's intellectual, social and emotional reality (Columbus Group, Morelock, 1993, p.16).*

This dissertation examines factors related to the adjustment of highly intelligent adults between the ages of 40 and 60 years old who have tested at least at the 99th percentile on tests of intellectual ability. Although it appears reasonable to assume highly intelligent people have advantages in making their lives highly satisfying, such is not always the case. Similarly, even though highly intelligent people are more likely to achieve wealth or noteworthy accomplishment, (Terman & Oden, 1959, Herrnstein & Murray, 1994) again, such is not always the case. The purpose of this study is to uncover factors that may explain the different outcomes seen in people of similarly high intellect.

Foster (1983) proposed that a secure and healthy self-concept is a necessary condition for the development of the drive to excel. Feldhusen and Hoover (1986) proposed that an inter-linkage of intelligence, self-concept, and self-esteem may engender the strong motivational force essential for high level production. Greenspon points out, however, that "Gifted people are different from those around them, which poses an immediate problem of self-identity" (1998, p. 164). It is possible that difficulties attaining a clear self-identity may contribute to additional problems in the development of high self-esteem and a strong self-concept in highly gifted individuals. Even though some people recognize their talents, they have low feelings of self-worth, and the study will examine the extent to which that inter-linkage affects adult productivity and utilization of talent.

The questions addressed by this dissertation examine how family, school and social background contribute to the self-identity and subsequent self-concept and self-esteem of highly gifted individuals in the study; what factors contribute to the development of individuals who are self-actualized, that is, fully utilizing their talents and abilities, either as achievers or in their personal lives; and, finally, which, if any, of these factors are related to the development of highly principled moral reasoning ability?

Daniel Goleman's **Emotional Intelligence** (1995) specifically addresses what makes some people more satisfied with their lives than others. Although Goleman refers to a general rather than a specifically gifted population, he cites numerous studies on brain function and human behavior that likely apply also to gifted people. He ties brain function and human behavior together in an effort to explain why people's behavior is often counterproductive for them. Goleman gives evidence that many of our lifelong patterns of behaviors are formed during infancy and early childhood. These lifelong patterns affect satisfaction and achievement.

Greenspon further asserts, "Comparisons to others and evaluations by others lead to judgments of relative worth" (p. 162). Early perceptions of our experiences become part of the fabric of our self-identities, self-concept, and self-esteem. These childhood perceptions, unless changed or reframed, affect our reactions and behaviors as adults toward people and events around us.

One's earliest experiences, most specifically within the family environment, significantly mold even the exceptionally gifted into unproductive patterns that they may need to address before they can maximize use of their intelligence so as to make concrete accomplishments and to achieve satisfaction with their lives. Although all people need to direct their own personal journey, those who are significantly different from the norm encounter feedback and circumstances that can have confusing, and sometimes detrimental, effect on the direction of their journey.

This study examines various elements in the backgrounds of exceptionally gifted adults and seeks to uncover explanations for levels of life satisfaction, achievement, and self-actualization in people of unusually high abilities. The findings should be useful to educators, parents, and psychologists, all of whom need answers to the question of how to inspire and ensure positive self-esteem, maturity, and general social and emotional adjustment, i.e., good mental and emotional health, of highly capable children so that these children can attain their full potential as adults.

## THEORETICAL FRAMEWORK

### Statement of the Problem

Research on the gifted has focused on two main areas of concern: first, the identification and description of the gifted individual in the context of experiences in both home and school, and second, the context of feedback to the gifted child both by parents and schools specifically related to intellectual achievement.

Identification is important primarily when it results in appropriate educational and emotional treatment of the child. The higher the intellectual level of the individual, the more problematic the indicated treatment. Research on topics including ability grouping, cooperative learning, curriculum compacting, self-esteem, and so on, rarely, if ever, touch upon the wide range of intellectual functioning among the gifted themselves.

The problem addressed in this study is the lack of information on adult highly gifted individuals regarding their perceptions of what was significant in their home and school environments toward encouraging or thwarting their emotional and intellectual development. Also, is it possible to isolate factors that enable highly gifted individuals to reach the highest levels of principled reasoning and self-actualization?

### Specific Objectives

The objectives of the study are:

1. to study the family and educational backgrounds of exceptionally gifted adults
2. to assess the subjects' perceptions of their own personal value and success
3. to isolate specific factors that are present in the backgrounds of the most self-actualized individuals
4. to isolate specific factors that are present in the backgrounds of individuals who are highly principled moral reasoners as measured by the DIT

### Theoretical Rationale

The present study seeks to identify the presence or absence of self-actualization in highly gifted adults. An integral aspect of the research is to uncover possible background information that may contribute to self-actualization in adults. This study investigates how highly gifted adults perceive their childhoods in relation to their family, school, and social backgrounds. According to Falk and Miller, (1998),

Research shows that the perceived appraisal of other people (perception of another person's response) has a direct effect on the self-image while the actual response of other people has an indirect effect, i.e. through perceptions (p. 151).

The investigation also seeks to record the subjects' assignment of relevance of background experiences to their adult lives, e.g., their own sense of accomplishment, fulfillment and satisfaction with their lives. The researcher is looking for common markers among subjects that may connect specific childhood circumstances to specific adult outcomes. In particular, has their unusually high general intelligence affected other aspects of their backgrounds, and, if so, how? A theoretical framework was derived in response to themes that emerged during the course of the data analysis. It provides the structure for examining in the results section emotional growth in highly gifted

individuals.

Self-actualization, a term specifically used by Maslow, Dabrowski and Piechowski, is often equated with the idea of living up to one's potential. Although the current research was undertaken with the rather narrow view that "living up to one's potential" means people have achieved intellectual and career success while also achieving inner satisfaction and emotional well-being, it became apparent that some people achieve inner satisfaction and a sense of emotional well-being without achieving overt career or financial success. Some attain career, intellectual, or financial success but never find a sense of inner satisfaction and emotional well-being. A primary goal of this paper is to elucidate the many sides of self-actualization, and the process of their attainment, in highly gifted adults.

## REVIEW OF THE LITERATURE

### High Giftedness

#### Background

More than 125 years of research on eminence, giftedness, and talent development have yielded a wealth of consistent findings regarding commonalities among highly gifted children and adults. Being highly gifted is associated with interests and behaviors, not just a faster ability to go through schoolwork or a higher likelihood of meeting with financial success. Being highly gifted leaves those who are highly gifted vulnerable to mixed messages from people who recognize their brightness but do not understand the other accompanying differences within the gifted individual.

The study of gifted children and adults first began in earnest in the 1860s with Francis Galton. After Francis Galton's *Hereditary Genius* (1869), no scientific investigations were conducted as to the nature of high intellectual ability until Terman's work. Galton surmised that genius runs in families, is hereditary. He sought men of accomplishment in order to discern whether or not they came from families full of eminent men. In the society of Britain's 1860s, however, it would be difficult to distinguish between the connections and opportunities of social class and raw, innate, inherited intelligence, something Galton did not attempt to do. Also, Galton's study did not address the incidence of *unsuccessful* members of the same families, and logically, he did not attempt to ascertain the different precursors to success or failure of members of the same family.

What makes Galton's work important is that he was the first to attempt to quantify characteristics of intelligence. He measured people's heads; had them perform various tasks of speed, dexterity, and memory; and asked for educational and family background information. In other words, he looked for patterns and similarities, found some and discarded others. He found that cranial size and finger tapping speed are not correlated with intelligence, for example.

Binet, in the late 19th century, developed a measure for assessing "feeble-mindedness," basically, the first intelligence test, later modified by Louis Terman at Stanford, and Terman, in so doing, also engendered interest in identifying for special educational treatment individuals who were at the high end of the intellectual continuum. The United States government became interested in the study of intelligence and had psychometricians and psychologists from the early part of this century develop the Army Alpha and Army Beta intelligence measures so that the Army could establish effective training procedures based on people's ability to learn and use information. The government also utilized these new tests to screen immigrants.

One thing became clear: ability to learn new material and put new learning to later use could be measured by these tests. But, the tests were not perfect. Background, motivation, language and culture all impacted an individual's performance at both testing and training. Controversy arose. Much study has been done over the years to determine why certain groups outperform other groups on intelligence measures. The measurement instruments fell into disrepute. Either the tests were flawed or our thinking about the importance of what they measure was incorrect. To many people it did not seem fair that people would be naturally created unequal; so many assumed the tests must be wrong.

Nevertheless, individual subjects in the current study presented all their available test scores; and the various scores are included on charts throughout the paper. The family backgrounds, the school experiences, the reactions and treatments of others to the subjects, as well as the subjects' reactions to their schooling and other people are all presented. The pattern of experience in the schools, schools that were throughout the United States, seems remarkably similar for the 41 subjects in this study. Whether or not their test scores pinpoint precisely their level of intellectual capability is not the point of the current research. The point is that on a wide variety of tests, these subjects scored at the 99th percentile or higher; these subjects were all unusually capable of reading, assimilating, and acquiring knowledge throughout their school years and adult lives. Under most definitions, 98th percentile scorers are considered "gifted," unusually intelligent. When precise scores are unavailable, intellectual level can be estimated based on standard deviations from other submitted scores and by comparing subject biographical data to normative information (Cox, 1926). All the subjects are near or above 140 IQ.

Several subjects in the present study are near 190 IQ. There is much evidence that the difference between a 140 IQ and an IQ of 190 is huge (Terman, 1925; Burks, Jensen, & Terman, 1930; Hollingworth, 1926, 1942; Webb, Meckstroth, & Tolan, 1982). The ability tests taken by the subjects had varying standard deviations but for the purpose of this study are assumed to be 15 to 16 points on the IQ scale. That means there is a minimum 3 standard deviation intellectual difference between the highest and lowest subjects in the study. In fact, the lowest measured subjects are nearly 3 standard deviations from the general population average themselves. A perspective is needed

in order to understand the impact of the rarity of finding similar individuals at ever-increasing IQ levels. Because of the nature of the bell curve, the likelihood of a child meeting someone else in class who is of similar intellectual level decreases as the IQ goes up. Children in the 105-125 IQ range are usually capable of doing the normal grade level coursework, but as most teachers know, children with IQs in the 120s are on average considerably quicker at learning and performing than the children below 110. There is a very noticeable difference within this IQ span of only 20 IQ points. Even though brighter than average, all of these children are likely to have at least a few classmates who are similarly intelligent and who will have similar interests, humor, values, etc. of children their age.

As one travels up the IQ scale another 20 points to 145, the difference in learning speed and ability is similarly different. The child at 145 learns faster, more thoroughly, and with fewer repetitions than the child at 125 IQ. But, because the child of 145 IQ may be alone in the class with that IQ level, neither the glasswork nor the play, reading, and value issues, as shall be shown in the literature review, will be common for that child with most of the other children in the class. It follows that the farther up the scale the children's ability places them, the more isolated they will be, the more difficult their task of becoming involved in the learning and the play and the friendships of their age-mates.

As a result of the increased disparity between highly gifted subjects and most classmates, even if the measurement instruments are not precise, the case study information provided in this paper gives example after example of the very real differences these subjects experienced in their classrooms growing up. The majority of them did not know their IQs. They were not learning to read early and developing interests in topics that did not attract the interest of their classmates because they were being groomed for intellectual greatness. They were simply being themselves.

### The Terman Studies

The longitudinal study of approximately 1500 gifted California school children by Lewis Terman and his colleagues is perhaps the most publicly recognized research on high ability anywhere (Burks, Jensen, & Terman, 1930; Oden, 1968; Terman, 1925; Terman & Oden, 1947, 1959). Many of our popular notions of gifted people emanate from the work of Terman, notions that are good and bad, correct and incorrect.

Lewis Terman began his famous longitudinal research on gifted children in the 1920s. The first volume of the series basically sets up how the research for the longitudinal study is to be performed. It identifies the study group selection process, the instrumentation, and so on. Terman's study group came almost entirely from two large California metropolitan areas, were from middle to upper class two parent homes with most fathers in the professional class. Asians and other minorities were rarely included in the sample. In addition, children were nominated for screening by their teachers. Later research by Pagnato and Birch underscored the basic problem with Terman's subject selection approach. Unless specifically trained to identify gifted children, teachers are likely to over-identify moderately gifted and miss highly gifted entirely (Pagnato & Birch, 1959). A frequently quoted summary of more than fifty years of research on the gifted group is from Oden (1968), one of Terman's research team members: "all the evidence indicates that with few exceptions the superior child becomes the superior adult" (p.50). It is true that gifted children turn into gifted adults; their superiority in any but the intellectual realm, however, is far from assured. In Terman's group, the children who were studied not only were all identified to their teachers and their parents as being gifted, they were given that information themselves. This is quite a different circumstance than for the subjects in the present study.

Aside from the educational and probable psychological advantages of being identified and treated for their differences, the Terman subjects attended school during a time when bright children were routinely grade-skipped, as well. Another problem with the findings of Terman's research, as interpreted by educators today, is that 33 of the 35 most gifted children in the cohort had been grade-skipped. As Gross (1993) so aptly points out:

*The generally positive academic and social adjustment reported for this group may not have characterized children of similar levels of ability whose talents were not recognized by their teachers and who consequently were not selected for participation in the study (p. 23).*

In the present study, parents as well as teachers were usually unaware of the high giftedness of the children. Past research into how well adjusted highly and profoundly gifted children are is probably more a statement of how well-adjusted they can be when their giftedness is recognized and treated both at home and in school, and when they receive appropriate educational and social placement in school.

Volumes IV: The Gifted Child Grows Up (1947) and V: The Gifted Group At Mid-Life (1959) hold particular relevance to the current study as pertains to social and play interests of gifted children compared to unselected, or randomly selected average children. From Volume IV, "First, a masculinity index was computed for each of the 90 plays and games on the basis of the amount and direction of sex difference in the preference scores of the control [nongifted, or unselected, random group]. If a given activity had a high preference score for boys and a low one for girls, the activity in question was considered masculine (p. 34)...the ninety play activities were rated by several judges for the amount of social participation and social organization they involve (p. 36)..."

*The interests of gifted children are many-sided and spontaneous. The members of our group learned to read easily and read many more and also better books than the average child. At the same time, they engaged in a wide range of childhood activities and acquired far*

*more knowledge of plays [activities] and games than the average child of their years. Their preferences among plays and games closely follow the normal sex trends with regards to masculinity and femininity of interests, although gifted girls tend to be somewhat more masculine in their play life than the average girls. Both sexes show a degree of interest maturity two or three years beyond the age norm (1959, pp. 15-16).*

The summary of the findings on sociability found in Volume V (1959) is also of particular interest to the current study:

*Comparisons on sociability indices showed gifted subjects of both sexes significantly below control subjects at all ages; i.e., age for age the control subjects had somewhat more interest than gifted subjects in plays that involve social participation. Much of the difference can be accounted for by the fact that the gifted child is more self-sufficient and thus more able to amuse himself (p. 10).*

Terman had noted in an earlier work that,

*Precocity unavoidably complicates the problem of social adjustment. The child of eight years with a mentality of twelve or fourteen is faced with a situation almost inconceivably difficult. In order to adjust normally such a child has to have an exceptionally well-balanced personality and to be well nigh a social genius. The higher the IQ, the more acute the problem (1931, p. 579).*

The combined information from these two volumes provides an interpretation that is in line with the observations of Leta Hollingworth (1942), discussed in the next section of this literature review. Again, in Volume IV, the authors make the following observation about the different ways gifted and nongifted rate some specific play interests:

*...several of the very mildly social games which appeal to gifted children are unpopular with average children because of the demands they make on intelligence (e.g., authors, anagrams, puzzles, checkers, chess) (p. 37).*

When children with different interests, reading background, and preferences are placed together for the majority of their school time, it can appear that the gifted are not as social, indeed are "more self-sufficient," than typical children. In fact, it is possible the gifted tire of playing games they lost interest in, or never developed interest in, two to four years earlier. It is also a double-bind of sorts to be so capable in an activity that it ceases to be fun for the other children who can rarely win.

It is also in Volume IV: *The Gifted Child Grows Up* (1947) that Terman notes that his subgroup of over 170 IQ did not earn appreciably different grades in school than the total gifted group. In fact, 25 percent of the extremely gifted college men had grades that were fair to poor. This information is relevant to the highly gifted throughout the last 50 years, as well, as the current research shows. It was also reported that the most highly gifted young people were described as "poor mixers" by their teachers and parents. Although they were not isolated by their classmates, many of the exceptionally gifted isolated themselves due, Terman conjectured, to issues of salience (Burks, Jensen and Terman, 1930). The previous information on play interests helps provide an explanation as to why this is so.

Qualities of character also interested Terman. He reported that on tests of "trustworthiness" and "moral stability" his average gifted child of 9 years old scored comparably to typical 14 year olds (1925). His subjects also exhibited high standards of truth and honesty, a trait that often caused them problems related to appearing tactless. This tendency toward frankness in the highly gifted is evident in this paper's case studies, as well.

Leta Hollingworth

Leta Hollingworth's (1942) descriptive research is based on observational records of children whom she identified as scoring above 180 IQ on the Stanford-Binet intelligence test. She began her career working for the City of New York as a social worker and psychologist screening both infants and inmates. It was during her role on the faculty of Teachers College, Columbia University, where she taught a course on exceptional children, that she first became interested in profoundly gifted children. After her experience with thousands of people at the low end of the intelligence scale, she chose to demonstrate for her Teachers College students the use of the Stanford-Binet by testing a student of one of her teacher college students. She had requested that a teacher select a "bright" child. The child tested at 187 IQ, and Dr. Hollingworth proceeded to screen and find first 4 more children above 180, and then an additional 7. She published one volume, *Gifted Children: Their Nature and Nurture* (1926), that included intensive case studies of the first five children. Her husband posthumously published her second volume, *Children Above 180 IQ* (1942), which included the additional 7 children, as well.

After the aforementioned experience, Hollingworth devoted her time and attention to the establishment of four special classes for gifted children as well as the classes for average children at The Speyer School. She supervised her teachers as they tried different methods of pacing, individualization, and social activities for the different intellectual and age levels of the children. Tolan (1990) summarized several of Hollingworth's conclusions that are pertinent to the current research as regards highly gifted children in a typical classroom:

The highly gifted cannot readily learn to value intellectual challenge and hard work (or gain solid work habits) when they have little or nothing to do in the classroom...Gifted children usually don't perceive themselves as especially able. They assume they're normal.

Therefore, anyone who can't see what they see or do what they do must be dumb. It is vital to help highly gifted children to understand their differences from others, and to see, as well, other people's strengths...Too often the authorities in the highly gifted child's world insist on rules that appear irrational or incomprehensible to the child...a 6-year old who reads at a 12th grade level is not likely to respect school authorities who insist upon filling in a phonics workbook day after day (p. 205).

Hollingworth wrote,

It is especially unfortunate, therefore, that so many gifted children have in authority over them persons of no special fitness for the task, who cannot gain or keep the respect of these good thinkers (1942, p. 261).

In a number of case studies that are presented in this paper, subjects voice anger and hostility toward authority figures. Silverman provides an excellent summary of Hollingworth's findings regarding issues of authority:

In some cases, gifted children may rebel against all persons in authority because of earlier negative experiences. If they are mishandled in their youth, some gifted individuals become incapable of dealing with insubordination of any kind. Because some form of subordination usually precedes leadership positions, their contentiousness might render them ineffectual in the work world. Negativism and cynicism can seriously hamper one's career goals (1990, p. 175).

Hollingworth was the first to point out that highly gifted children are often easier to discipline than less gifted children (1931). They also have a great love of and need for "exactness in all mental performances" (1927, p. 4), and as Silverman notes, "They cannot resist the temptation to set someone straight if they perceive the slightest loophole in a statement. This tendency appears to increase with higher levels of intelligence" (1990, p. 176). All of these observations dovetail into the issue of problems with authority. The case studies are replete with examples of the study subjects feeling unheard, not respected, baffled, hostile, and angry over the treatment they experienced at the hands of their parents, teachers, and many others. Hollingworth suggested a program of emotional education to deal with the tendencies particular to highly gifted children.

Terman's writings often contained references to some gifted children's bad attitudes and habits of laziness. Hollingworth, however, concluded that gifted children were not lazy, but bored and unmotivated. She noted that gifted children received "daily practice in habits of idleness and daydreaming" (1942, p. 258) when they were given glasswork that they had mastered much earlier, sometimes years earlier, than classmates. She also observed that gifted children became so accustomed to low or little effort at learning and schoolwork that they expected an "effortless existence" (1930, p. 442), something borne out by the experiences of a number of my highest IQ subjects. In fact, highly gifted children are often perceived as being inattentive, unable to attend to glasswork, and socially immature when they are, in fact, simply intellectually misplaced. Hollingworth gave a representative example in the following quotation:

A case in point is that of a six-year-old boy of IQ 187, who was reported as too immature for the work of the first grade, because he would not attend to the lessons given, but would "go off by himself, lie down on his back, and look up at the ceiling." This child's mental age was twelve. He could read as well as sixth grade children ordinarily can, according to standard tests. He could perform all the fundamental processes of arithmetic, could square numbers and could read numbers to the billions. Bored with the material being presented to beginners, yet not knowing how to formulate his difficulty, he simply drifted away from the teacher and the group, as his childish solution of the situation (1930, p. 443).

Hollingworth found, as Terman had, that highly gifted girls show less interest in traditional female play interests (1931, 1942). She also developed a theory that there is an optimal intelligence level of between 130 and 150 IQ wherein the individual "comprehends more clearly, but not too much more clearly" (1940, p.274) than most children so is more likely to become a leader and be accepted by the group. As vocabulary and interests diverge, however, the highly gifted are less interested in other children their age and isolation is likely to increase. A concomitant problem is the perception by others that the highly gifted are bossy when, in fact, they are simply interested in making sure everything runs in what they perceive to be the most interesting and complex fashion (1931).

In the area of moral reasoning Hollingworth's 180+ IQ children exhibited an unusually passionate concern for issues of life and death, man's relationship with God, and questions about the origins of life (1942).

### Gross

Gross has been an outspoken advocate in Australia for the needs of highly gifted children. She is in the process of conducting an extensive longitudinal study of 40 highly gifted children, 15 of whom form the basis for her book, *Exceptionally Gifted Children* (1993). She describes in depth the characteristics of these children and of their families' efforts to find them the best possible school matches. When she began her work the Australian schools were no more hospitable to effective education for highly gifted children than most schools in the United States (Ruf, 1986). Australia has a much smaller population than the United States, however, and her work has had more influence than the work of gifted specialists in the United States, in turn leading to governmental and attitudinal changes in Australia during the 1990s.

Particularly pertinent to the current study are Gross's findings on the play interests of her subjects. As with other researchers (Benbow, 1985; VanTassel-Baska, 1983), Gross found that reading was far and away the most popular leisure time activity for her subjects. In fact, the majority of the homes in her study had over 500 books in them. The 1982 Midwest Talent Search Finalists (VanTassel-Baska, 1983) had similar high numbers of books, and avid readers, in their homes. Interestingly, Benbow (as cited in Gross, 1993) compared the number of books in the homes of moderately gifted compared to the "extremely gifted mathematical and verbal reasoners" and found the extremely gifted homes had more than 500 books by a 5 to 1 ratio to the moderately gifted homes. This finding indicates that highly gifted individuals, apparently as part of their nature, demand large supplies of reading material. The diversity of reading material and topics among highly gifted stands out as quite different from nongifted to moderately gifted, as well.

The type of information background that highly gifted, avid reading, children take with them to school and the playground sets them apart in many ways from their same age classmates. Science fiction is the most common type of reading preferred by the young exceptionally gifted child (Gross, 1993; Terman, 1925; VanTassel-Baska, 1983; Witty & Lehman, as cited in Gross, 1993).

Gross gave the Defining Issues Test, used in the current study, and Coopersmith Self-Esteem Inventory to eight of her highly gifted subjects who were over age 10. The DIT is not normally used with elementary school children because the necessary reading level is not reached by most children until they are 12-13 years old. Gross compared the scores of her subjects with those of American children at the junior high, high school, and college levels. All the study children had mental ages of at least 16 at the time of testing but all were below the age mean of the junior high norm group. As a result, all eight scored above the junior high mean, four scored above the high school mean, and two scored above the college mean.

Gross compared the DIT results to the Coopersmith SEI results and discovered that three children who scored above the junior high mean but who had not been accelerated beyond age peers in school all had seriously depressed self-esteem scores. The child with the highest DIT score also had the highest SEI score and had, not coincidentally, according to Gross, been radically accelerated in school and was working with children averaging five years older than he. In other words, the mental age of his classmates as well as their general developmental level, was more aligned with this child's than for the other study subjects. As Gross concluded:

It may be that, where exceptionally gifted children have not been accelerated to be with children at similar levels of intellectual and social development, significantly elevated levels of moral development may intensify their awareness of thinking and feeling in ways that set them apart from their age peers. The loneliness and bewilderment of [her non-accelerated subject who scored low on the SEI] is more readily understood when one considers that at age 10 he was capable of moral reasoning at levels which characterize Kohlberg's postconventional stages, while his classmates may well have been functioning within Stages 1 and 2, where rules are followed not from an appreciation of their value, but simply to avoid punishment. (1993, p. 255)

The young exceptionally gifted subjects in Gross's study indicated play interests similar to those in the studies of Hollingworth (1936, 1942) and Terman (1925), that is, both interests were age advanced and of a more intellectual nature than for their age-mates.

### Others on Gifted

Many findings of the present study support earlier findings. For example, Tannenbaum (1962) found that when adolescents show talent in sports, music or art, they are the recipients of less hostility from their classmates than students who are simply academically brilliant. Kincaid (1969) studied 561 children who scored at or above 150 IQ and found that their play interests centered around activities and games requiring the intellect rather than the predominantly sensori-motor activities of their age-mates. Among their interests were museum visits, discussions, and puzzles.

Numerous researchers have noted the advanced moral reasoning and early emergence of ethical concerns among the highly gifted. Carroll summarized his observations of children over 170 IQ as follows:

Nothing to them is ever wholly white, or wholly black, wholly right or wholly wrong...The really great humanists are found not among bigots of limited intelligence, but among those who have sufficient intellectual capacity to realize that all values are relative (Carroll, 1940, p. 123).

Janos, Robinson and Sather (1983) used the Defining Issues Test to compare a group of radically accelerated university students who were aged 11-18, and two groups of college age National Merit Finalists who had not been accelerated, to a group of typical college students. All three gifted groups exhibited significantly higher moral judgment, as measured by the DIT than did the typical university students.

### Selected Biographies of Highly Gifted

The study subjects in the current paper have measured IQs between 140 and 190. Thirty-two percent of the 41 subjects test above 160 IQ. None of them is unusually wealthy or famous, but none lives in poverty, either. The intimate nature of their open-ended survey answers may give the impression that the subjects are unusually depressed and unsuccessful, and the reader is left wondering whether or not this sample is representative of highly gifted people and whether they are simply less gifted than people who achieve eminence.

The biographical descriptions of the lives of four men of genius, three successful, one not, serve to illustrate the background similarities between them and the 41 subjects of the current study. The descriptions of Edison, Einstein, Feynman and Sidis pay particular attention to the personal factors which seem to accompany high giftedness. Furthermore, the educational and familial ramifications of high giftedness are also underscored.

Thomas Alva Edison is well known as an inventive, intelligent man. Edison's biographies portray him as a person who painstakingly plodded his way through countless experiments until he finally found a filament that worked in his light bulb. Edison is often quoted for his own definition of genius: "One percent inspiration and 99 percent perspiration." Yet, everything about Edison's life and work behavior indicate he worked from a base of high intelligence, immense curiosity, and obvious intrinsic motivation. Money, to him, was for funding his research. Biographies and encyclopedia entries on Edison, list characteristic after characteristic that are uniformly descriptive of an exceptionally or profoundly gifted man of probable intelligence quotient in excess of 170 or 180. (Dyer, Martin, & Meadowcroft, 1929; Josephson, 1959; Encyclopedia Britannica, 1974; World Book, 1990).

Edison's family background is important to understanding his clear use of his abilities during his life time of invention. Edison, born in 1847, was raised primarily in Ohio and Michigan. His first public school reacted poorly to him and labeled him "retarded." Edison did not fit in and was blamed for his lack of conformity and his endless questioning. His mother removed him from school and taught him at home for the next three years. It was not unusual for most American school children to attend only 8 years of grammar school at that period of history, and many children attended far less. After three years of instruction by his mother, Edison taught himself, primarily by reading and experimenting on his own. His primary teacher and supporter was his mother. He did not get along well with his father, and Edison left home in his early teens to both support himself and continue his independent learning. Although he married twice (the first wife died) and had children, he was not close to either wife or his children. He also had few close friends, again, not unusual for a profoundly gifted person due to scarcity of intellectually compatible, or interested in common subjects, individuals.

Edison was not a religious man, but he did believe in a supreme being that he referred to as a Supreme Intelligence. He was aware that his reputation as a great inventor was nothing compared to the ability to create life forms. He was especially attuned to the question and possibility of life after death. The present study's case studies illustrate the same tremendous bent toward such philosophical issues.

Albert Einstein is known as one of the greatest scientists of all time. He was born in 1879 and raised in Germany and Switzerland where rigid schooling was normal for the children of the times depending upon their ability to learn. Einstein showed little scholastic ability and appears to have suffered from his school years. It is clear from the later research of Hollingworth (1926, 1942) that Einstein's probable IQ of 180+ rendered him a poor fit with the more normative education to which he was exposed. There is less anecdotal and personal information available on Einstein compared to Edison dealing with his childhood.

Einstein, too, was married twice. His first marriage was to his university sweetheart. He enjoyed his marriage and his children. Unlike Edison, Einstein appears to have married someone with whom he was intellectually compatible. The marriage ended in divorce, however, after several years of enforced separation that was due to the political turmoil in Europe. Like Edison, Einstein was not motivated by money but by ideas and, in Einstein's case in particular, ideals. Ultimately, Einstein suffered greatly as his ideals were one by one crushed by the realities of the world during the tumultuous history of his time.

The famous stories about the great genius "wasting his time in obscurity" working in a patent office are clarified by his biographers (Clark, 1971; Pais, 1982). The patent office job gave Einstein time to think and develop his theories. His early, important publications brought him offers from universities and institutes which enabled him to support himself and his family, and he did finally accept those offers. His connections with universities, and the fame that came with his theories, brought him into regular contact with other great minds from around the world. He had many friendships and associations that were satisfying and stimulating.

According to Pais (1982), Einstein was not associated with an orthodox religion but had a very spiritual nature. Although he felt that belief in a personal God was too specific to fit what was transpiring in the universe, he did not believe the universe was one of chaos or chance, either. He once said, "God may be sophisticated, but He is not malicious." Until the end of his days Einstein explored human nature, the nature of the universe, and matters of purpose and existentialism.

Richard Feynman was an American theoretical physicist, born in 1918 to an immigrant couple. Unquestionably as bright as both Edison and Einstein, loosely lumping them into the profoundly gifted category of 180+ IQ, Feynman grew up in a stable home where both parents were loving and tolerant toward Richard and his interests in scientific experimentation. He was entirely singular in his interests in that literature and writing held no interest for him either at home or in school. His parents were never unduly concerned about his poor marks in non math and science courses and let him pursue his interests. He was largely self-taught until he went to college, although he did go through the usual public schooling in a Long Island community in New York.

Feynman's success was primarily manifested through his interactions with others. He rarely published his work but instead shared clearly with colleagues and students who passed on the information. He was a workaholic, like Edison, who spent large amounts of time on projects and topics that interested him. He taught at MIT and Stanford and was one of the youngest members of The Manhattan Project.

Shortly before he died of cancer, quite possibly caused by exposure to atomic bomb testing, he sat on the panel reviewing the Challenger Shuttle disaster. Feynman quickly concurred with some of the scientists who had uncovered the problem with the infamous "O-rings" but whose findings were ignored. Never one to mince words, Feynman illustrated the finding with simple materials, a glass of ice water and water faucet rubber washer, at an investigative conference. Prior to Feynman's involvement, the other committee members and representatives from the various aerospace industries were busily defending themselves. Feynman left them exposed and without excuses. Two elements that are probably key to Feynman's realizing his potential were his supportive parents and a strong, loving connection with a childhood girlfriend who became his first wife. The young woman, Arline, was compatible with Richard in intellect, humor, and temperament. Although she died of tuberculosis while they were still in their twenties, her love and support had a profound effect on Feynman. Feynman married two more times, first badly, and the third time to have children. He was a devoted father and, although the marriage was less than intellectually or temperamentally ideal, he worked to make a good family environment for his adored children.

William James Sidis was estimated to have had an intelligence quotient near 250. There is no disputing that he was a child prodigy; he is, however, often cited as an example of "early burnout." His parents were so proud of their son's talents that the mother devoted herself entirely to the educating of her unusual son. She directed and accompanied him everywhere, and little William had little to no say in the matter. His parents seemed primarily interested in showing off their talented son.

Sidis presented his first scientific and mathematical paper at a conference of learned mathematicians in 1910 when he was 12 years old. He eloquently and expertly predicted the existence of black holes in a book published in 1925 under a pseudonym; and he supported his beliefs with mathematical proofs that eventually proved to be largely correct. The press covered his every move. Sidis felt used by his parents and the media and began to withdraw from intellectual and public life. He eventually would accept no jobs that were more than ordinary, and when asked, told people that his early precocity had disappeared. There is evidence that his brain power was not at all diminished, however; he simply refused to be used and shown off by others.

At one time Sidis had a strong interest in a woman whom he had met through a social concern group. She was not interested in him, however, and he never found a suitable partner. By the time he was an adult, he refused to have anything to do with his mother, something she never understood after all her sacrifice on his behalf. Because he had been taken out of normal schools and escorted by his mother to college classes early in his teens, Sidis never developed friendships and social skills. Norbert Weiner experienced similar radical acceleration, but his family gave him opportunities to develop normal social activities and relationships at the same time. It has been suggested that a key difference between the success of Norbert Weiner and his contemporary child prodigy, William James Sidis, was in the former's ability to make a good marriage connection. Sidis died a solitary, lonely man in his forties. Weiner went on to be the father of cybernetics as well as a happily married husband and father.

### Talent Development

Three resources are presented here to underscore the similarity between the subjects in the current study, who are highly gifted but not particularly rich, famous or eminent, and other highly intelligent, talented people who have achieved eminence.

All of the subjects in *The Early Mental Traits of Three Hundred Geniuses* (C. Cox, 1926) and *Cradles of Eminence* (Goertzel & Goertzel, 1962) achieved eminence, unlike the majority of the subjects in the current study. The similarity between the eminent and non-eminent subject groups, however, is clear. High intelligence affects one's environment, viewpoint, and interactions. Interestingly, the majority of eminent subjects were either pushed or strongly facilitated by their mothers. The mother's role, nonetheless, often did not result in either appreciation or a good relationship between the mother and eminent child (Goertzel & Goertzel, 1962). A number of the subjects in the current study, 17%, had rejecting or hostile mothers or stepmothers, but most had ineffectual or decidedly non-pushy parents who worked primarily to make their highly gifted children fit into the social and educational order as it existed.

### Catherine Cox, Terman Series

Volume II: *The Early Mental Traits of Three Hundred Geniuses* (Cox, 1926) is a useful resource for those interested in estimating intellectual levels. The case studies provide anecdotal descriptions of early childhood behavior as well as the home and educational lives of the subjects. Cox and her research team gathered background information on approximately 300 people of eminence throughout history.

Final subjects were included in the Cox volume, part of the Terman research series (Volume II), for whom the researchers had significant early childhood information. Cox developed a system for estimating the Stanford-Binet intelligence level of the subjects based upon the age at which they began doing common childhood activities. In other words, she and her team used a ratio IQ estimate, e.g., if the average child talks at 2.5 years and the subject talked at 1.5 years, the ratio IQ would be 167. The researchers used a combination of accomplishments and activities found in biographical writings for making their estimates.

After combing the biographical material on each subject, the team quantified the ability level and grouped subjects by ability level. In the book, Cox explains when there were difficulties, due to conflicting or missing information, in making the estimates. Then, a case study of each subject was presented that concentrated on the activities and behaviors of the eminent person during his earliest years.

Interestingly, the estimated IQs fell into identifiable career groupings, groupings that are still reflected by score report tables today, e.g. Graduate Record Exam, Miller Analogies Test Score Results booklets. The results of the Cox work are especially important for those who are concerned about the validity of an IQ measure and its importance in describing basic characteristics of individuals at different intelligence levels. People with high IQs are not just "smart." They are different in many, many ways, and Volume II describes these differences in ascending order.

An overwhelming difference between the early, lower IQ subjects in Volume II and the later, higher IQ subjects, is in their levels of intrinsic motivation to learn. Although all the subjects who became eminent tended to perform well when caring adults were an integral part of their lives, the subjects in the highest IQ categories studied and learned not only what their parents and teachers presented, but they continued to follow their own interests passionately. The eminent individuals covered by the book usually required the facilitation of adults more than instruction from adults. Cox and her team made it evident that the children who were pushed the most by their parents were pushed in response to the child's high capacity to learn.

Most of the individuals who had the highest IQ estimates and grew to be eminent in their fields were tutored at home or given highly individualized training. The generally negative descriptions of their schools and classroom teachers are similar to the complaints of Hollingworth's students before they entered her program, Gross's non-accelerated students, Goertzel and Goertzel's subjects, and the subjects in the current study. In fact, the subject of schooling, and the disdain, difficulties, and outright failure connected to regular schooling, appears to be the most common of all elements linking the highly gifted from one generation to another.

An additional common link between the generations of highly intelligent people is the difficulties they presented to their families. Some families simply adapted to their child's talents and arranged whatever seemed to work best. The children of such families generally grew to have the fewest impediments, among highly gifted subjects, to bringing their talents to eminent fruition. Talent has never been enough, though. For every eminent individual, Cox is able to identify some experiences or people who gave the individual the necessary support.

#### Goertzel and Goertzel

In their book *Cradles of Eminence* (1962), Goertzel and Goertzel explore the backgrounds of more than 400 "Famous twentieth century men and women" (book cover description). Whereas Cox grouped her subjects by estimated IQ levels, the Goertzels combed their biographical data for similarities in background vis-à-vis family life, childhood problems such as poverty, death of parents, etc.

The eminent subjects of *Cradles of Eminence*, and the leaders in their field described in Bloom's *Nurturing Talent in Young People* (1985), described in the next section, shared one primary background factor: at least one parent, and usually the entire family, facilitated the growth of the talent area by providing opportunity. Opportunity most often came through access to books, materials, high level tutoring, coaching, or other instruction, and either modification of, or relief from, normal schooling. Famous examples of "losers" who dropped out of school, but did well anyway, are almost uniformly highly gifted people who had no patience for the normal school setup. Steven Spielberg, as a modern-day example, routinely skipped school to work on home movie productions (personal conversation, 1991). His mother wrote his excuses. As the Goertzels point out:

Rejection of the classroom is an international phenomenon and has little to do with whether the schools are public or private, secular or clerical, or with the philosophy of teaching employed in the various schools" (p. 242).

The Goertzels also note that "A strong drive toward intellectual or creative achievement is present in one or both parents of almost all of the four hundred men and women of the twentieth century investigated here...by conventional standards the attitude of the family toward formal schooling is often careless or negative" (pp. 3-4). Additionally,

In homes which cradle eminence there are strong tendencies to build directly on personal strengths, talents, and aims rather than to assume that there is a large, specific body of knowledge that everyone should possess (p. 6).

The other children [the 2 out of 5 who did not complain about school] are those who, recognized by their teachers as having unusual abilities, were given special guidance and encouragement and were accelerated...There is an acute need in the Four Hundred for direct and frequent communication with intelligent adults. When this need is met to a reasonable degree in the school, the school rebellion is much lessened. The tutor, who is after all a teacher, does not draw upon himself the usual venom which the classroom teacher often elicits from the Four Hundred (p. 256-257).

The actual family interactions, hardships, social and emotional characteristics outlined by the Goertzels largely coincide with those of the subjects in the present study. In fact, if someone were to read *Cradles of Eminence* without knowing that each subject grew to become eminent, the case histories, the difficulties, school experiences, the talents, and the interests look much the same as the subjects in the current study.

The Goertzels reference a study by Dael Wolfe wherein Wolfe estimates that approximately "half the gifted students who graduate from high school in the United States each year come from homes where the parents have no particular interest in schooling or in learning and

that this half tends to become wasted" (p. 7). Given that every study cited here concludes that the regular educational process has not worked for the majority of highly gifted subjects, it becomes clearer how pivotal the parental role is in eventual eminence or successful use of high potential.

### Benjamin Bloom

In the book, *Developing Talent in Young People*, edited by Bloom (1985), talent areas are explored via exceptionally high achievers in a number of talent fields. Particularly relevant to the current study is that talent is rarely discovered and fostered by the schools as much as it is by parents, early tutors, coaches, and private lesson instructors. In fact, in the cases of various artists and athletes, regular schooling had to be dropped as the maturing star needed more and more time for practice and competitions. In fact, in most cases, the talent becomes evident only after the child has been exposed to the talent area.

Only rarely were the individuals in our study given their initial instruction in the talent field because the parents or teachers saw in the child unusual gifts to be developed more fully. They were given the initial instruction and encouragement to learn because their parents placed high value on one of the talent areas--music and the arts, sports, or intellectual activities. The parents wanted all their children to have a good opportunity to learn in the talent area they preferred (p. 544).

Although the authors conclude that far more people could achieve at much higher levels if their environments were as positive as those in *Developing Talent in Young People*, they write that, "Another general quality that was noted in each of the talent fields was the ability to learn rapidly and well" (p. 545). Bloom's study is important to the current study because all of the participants in the current study clearly have high natural ability to learn rapidly and well; and yet they may appear to the reader to be relatively unsuccessful compared to the subjects of Bloom's book. It is significant to contrast the backgrounds of highly capable people in order to determine possible explanations for high or low achievement as well as different life choices. Furthermore, Bloom's study is about talent development, whereas the current study deals more specifically with emotional growth.

In the more intellectual pursuits covered in Bloom's study, research neurology and mathematics, the subjects were mostly good students whose background descriptions are quite similar to those of the present study participants. Nearly all the mathematicians and scientists observed that school was more incidental than useful for learning, and they believed their real learning took place outside of school. The exceptions were with excellent, intelligent teachers who knew their subjects well and made high demands on their students. School did successfully serve the purpose of providing interesting and enjoyable extracurricular activities and sports.

Again, there is a significant difference between the family background experiences of the Bloom subjects and the participants in the current study. The research neurologists and mathematicians came from very stable and supportive homes that modeled a strong work and achievement ethic. The parents were uniformly supportive of each other and their children. In the current study it is clear that support versus neglect or emotional abuse makes a considerable difference in highly gifted people's ability to use their intellectual powers to best advantage.

### Human Development

#### Cognitive Development Theorists: Erikson and Maslow

Erikson, a high school dropout who studied on his own by traveling, reading, and carefully observing, developed a humanistic theory of human development after he studied for a while with Freud. He believed that neither Freud's theories nor behaviorism could fully explain the intricate course of human development. In *Identity, Youth, and Crises* (1968), Erikson described a series of eight, interdependent developmental crises that all individuals face. How each crisis is resolved has lasting effect on the person's self-image and view of society. Chart 1 describing Erikson's stages of psychosocial development, borrowed from Lefton (as cited in Woolfolk, 1995), is presented here.

#### Chart 1 Erikson's Eight Stages of Psychosocial Development

Marcia, and his colleagues Schiedel and Archer, expanded on Erikson's work. Crucial to the present study concerning the road to self-actualization for highly gifted adults is the suggestion by Marcia that adolescents face four possible alternatives when solving the crisis of "who am I?" (Marcia, 1980; Schiedel & Marcia, 1985). Woolfolk (1995) offers a clear description:

The first is identity achievement. This means that after considering the realistic options, the individual has made choices and is pursuing them. It appears that few students achieve this status by the end of high school. Most are not firm in their choices for several more years; students who attend college may take a bit longer to decide (Archer, 1982). Identity foreclosure describes the situation of adolescents who do not experiment with different identities or consider a range of options, but simply commit themselves to the goals, values, and lifestyles of others, usually their parents. Identity diffusion, on the other hand, occurs when individuals reach no conclusions about who they are or what they want to do with their lives; they have no firm direction (p. 70.)

The final alternative is called a moratorium because it is a form of break from the task of deciding who one really is and what one ought to do. Although Erikson describes identity formation as a task of adolescence, it appears likely, especially when considered in the context of the findings of the present study, that growth for some people includes reassessments of who one is at different times in life.

Maslow, like Erikson, was concerned that both behaviorism and Freudian theories left out motivational factors, personal volition, for example, and the deep impact of the human ability to think and reason, not just react. Both theorists emphasized the role that an individual's own perceptions of the world and society played. Maslow proposed a psychosocial theory of development that focuses on the emergence of self, the search for identity, and the individual's relationships with others throughout life. He developed a hierarchy of needs to illustrate his theory of how human beings are motivated. (See Figure 1).

Figure 1 Maslow's Hierarchy of Needs

- Self-actualization
- Esteem (including self-respect and feelings of success)
- Belongingness and Love
- Safety (security, order, stability)
- Physiological needs (satisfaction of hunger, thirst, and sex)

Maslow posited that until humans have their physiological needs of hunger, thirst, shelter, and rest met, they cannot concern themselves with safety (1954). Humans will be more strongly motivated by a need to feel safe than they will care about belongingness and love needs, and so on. In fact, initial analysis of the current case study materials was driven by an assumption that Maslow's hierarchy is correct. As increasing amounts of disconfirming data accumulated in the current study analysis, however, the order of Maslow's hierarchy proved an inadequate explanation of the maturation process within the present study group. The investigative use of items listed on the hierarchy was nonetheless helpful.

Maslow's description of self-actualization remained useful primarily because it helped add structure to the present study's assessment of self-actualization and the recognition of its presence or absence in study participants. His hierarchical precursors, however, did not prove to be predictive of eventual achievement of self-actualization. Maslow's description as presented here in Table 1 is taken from Turner and Helms (1986).

Table 1 Maslow's Characteristics of Self-Actualizers

In order to study the self-actualizing personality, Maslow selected 48 individuals who appeared to be making full use of their talents and were at the height of humanness. His subjects were students and personal acquaintances, as well as historical figures. In the final analysis, he described 12 "probable," 10 "partial," and 26 "potential or possible" self-actualizers. His analysis of these individuals revealed fifteen traits that he felt were characteristic of the self-actualizing personality.

1. More efficient perception of reality.

Many self-actualizing persons are able to perceive people and events realistically. They are objective in their analysis of the environment, and are able to detect that which is dishonest or false.

2. Acceptance of self and others.

People with self-actualizing personalities lack such negative characteristics as guilt, shame, doubt, and anxiety--characteristics that sometimes interfere with the perception of reality. Individuals with healthy personalities are capable of accepting themselves for what they are and know their strengths and weaknesses without being guilty or defensive.

3. Spontaneity.

Self-actualizing people are relatively spontaneous in their overt behavior as well as in their inner thought and impulses. Although they may conform to societal standards, there are those who are concerned about the roles society expects them to play. Maslow discovered that some self-actualizing people develop their own values and do not accept everything just because others do. While others may accept the status quo, self-actualizers perceive each person, event, or object as it really is and weigh it.

4. Problem centering.

Unlike the ego-centered personality, who spends much time in such activities as introspection or self-evaluation, problem-centered individuals direct their energies toward tasks or problems. Problem-centered persons are also likely to consider their goals important.

5. Detachment.

Maslow discovered that his subjects needed more solitude than the average person. The average person needs to be with others and soon seeks the presence of other people when left alone. (This reflects the need for belongingness and esteem derived from others.) Self-actualizers, on the other hand, enjoy privacy and do not mind being alone.

6. Autonomy.

As can be inferred from nearly all the characteristics of the self-actualized personality, such people have a certain independence of spirit. Individuals are propelled by growth motivation more than by deficiency motivation and are self-contained personalities:

*They [self-actualizers] are dependent on their own development and continued growth on their own potentialities and latent resources. Just as the tree needs sunshine and water and food, so do most people need love, safety, and other basic need gratifications that can come only from without. But once these external satisfiers are obtained, once these inner deficiencies are satiated by outside satisfiers, the true problem of individual human development begins, e.g. self-actualization.*

7. Continued freshness of appreciation.

Self-actualizing people have the capacity to continually appreciate nature and life. There is a naïveté, a pleasure, even an ecstasy about experiences that have become stale to others. For some of the subjects studied, these feelings are inspired by nature; for others the stimulus may be music; for still others, it may be children. But, regardless of the source, these occasional ecstatic feelings are very much a part of the self-actualizing personality.

8. The mystic experience.

Self-actualizers are not religious in the sense of attendance at formal worship, but they do have periodic peaks of experience that Maslow describes as limitless horizons opening up to the vision, the feeling of being simultaneously more powerful and also more helpless than one ever was before, the feeling of great ecstasy and wonder and awe, the loss of placing time and space with, finally the conviction that something extremely important and valuable had happened, so that the subject is to some extent transformed and strengthened even in his daily life by such experiences.

9. Gemeinschaftsgefühl.

This German word, first coined by Alfred Adler, is used by Maslow to describe the feelings toward mankind that self-actualizing persons experience. This emotion, which might loosely be described as “the love of an older brother,” is an expression of affection, sympathy, and identification.

10. Unique interpersonal relations.

Self-actualizers have fewer “friends” than others, but they do have profound relationships with those friends they do have. Outside of these friendships, they tend to be kind and patient with all whom they meet. An exception is the harsh way they sometimes speak to hypocritical, pretentious, or pompous people. For the most part, however, what little hostility they exhibit is based not on character but on situation.

11. Democratic character structure.

Maslow found that without exception, the self-actualizing people he studied were democratic, being tolerant of others with suitable character regardless of their social class, race, education, religion, or political belief.

12. Discrimination between means and ends.

Unlike the average person, who make decisions on expedient grounds, self-actualizing people have a highly developed ethical sense. Even though they cannot always verbalize their moral positions, their actions frequently take “the higher road.” Self-actualizers distinguish means from ends and will not pursue even a highly desirable end by means that are not morally correct.

13. Philosophical, unhostile sense of humor.

The humor of self-actualizers is not the ordinary type. As Maslow (1970) describes it:

*They do not consider funny what the average man considers to be funny. Thus they do not laugh at hostile humor (making people laugh by hurting someone) or superiority humor (laughing at someone else's inferiority) or authority-rebellion humor (the unfunny, Oedipal, or smutty joke). Characteristically what they consider humor is more closely allied to philosophy than to anything else. It may also be called the humor of the real because it consists in large part of poking fun at human beings in general when they are foolish, or forget their place in the universe, or try to be big when they are actually small. This can take the form of poking fun at themselves, but this is not done in any masochistic or clownlike way. Lincoln's humor can serve as a suitable example. Probably Lincoln never made a joke that hurt anybody else; it is also likely that many or even most of his jokes had something to say, had a function beyond just producing a laugh. They often seemed to be education in a more palatable form, akin to parables or fables.*

14. Creativeness.

Without exception, every self-actualizing person that Maslow studied was creative in some way. This creativity is not to be equated with genius of a Mozart or an Einstein, since the dynamics of that type of creativity are still not understood. Rather it is what Maslow calls “the naive and universal creativeness of unspoiled children.” He believed that creativity in this sense is possibly a fundamental characteristic that we are all born with but lose as we become enculturated. It is linked to being spontaneous and less inhibited than others, and it expresses itself in every day activities. Described quite simply, it is a freshness of thought, ideas, and actions.

15. Resistance to enculturation.

Self-actualizers accept their culture in most ways, but they still, in a profound sense, resist becoming enculturated. Many desire social change but are not rebellious in the adolescent sense. Rather they are generally independent of their culture and manage to exhibit

tolerant acceptance of the behavior expected of their society. This, however, must not be construed as a lack of interest in making changes they believe in. If they feel that an important change is possible, their resolution and courage put them at the forefront of the battle. Maslow believes that the self-actualizers he describes are not revolutionaries, but they very easily could be. He further states that they are not against fighting for social change; rather, they are very against ineffective fighting.

The subjects studied by Maslow were for the most part highly intelligent and possessed several or even many of the characteristics so far presented. This does not mean, however, that they were perfect. In fact, Maslow noted a number of human failings associated with self-actualized people. Some can be boring, stubborn, or vain, have thoughtless habits, be wasteful or falsely proud. They may have enormous emotions of guilt, anxiety or strife, and may experience inner conflicts. They are also "occasionally capable of an extraordinary and unexpected ruthlessness." This ruthlessness may be seen when they feel they have been deceived by a friend or if someone has been dishonest with them. They might, with a surgical coldness, cut the person verbally or abruptly sever the relationship.

### Emotional Development Theorists: Dabrowski and Piechowski

Like both Erikson and Maslow, Dabrowski felt that behaviorism and Freudianism cannot adequately explain the course of human behavior and the differing outcomes among people who appear to be experiencing similarly handicapping life conditions. He concluded that some individuals must be born with a higher ability to transcend life's difficulties and evolve into mature, wise, "evolved" human beings than other people.

Dabrowski was a Polish psychiatrist who witnessed the terrible affects of both World Wars. He himself gave asylum to Jews during World War II, suffered imprisonment and torture, and was forbidden to continue his work. Through his observation of self-sacrifice and noble behavior of some people alongside inconceivable inhumanity on the part of others, he began to study how both could exist. He studied the histories of the eminent and searched for examples of the "authentically real, saturated with immutable values, those who represented 'what ought to be' against 'what is'" (Dabrowski, as cited in Piechowski, 1975, p. 234).

According to Silverman, many of the people attracted to the work of Dabrowski recognized their own struggles described in his work. Rather than simply accepting life as it is, such people

...could not reconcile themselves to concrete reality; instead, they clung to their creative visions of what ought to be. They searched for "a reality of a higher level. And often they were able to find it unaided" (Dabrowski, in Piechowski, p. 236). These clients experienced intense inner conflict, self-criticism, anxiety, and feelings of inferiority toward their own ideals. The medical community labeled these conflicts as "psychoneurotic" and attempted to "cure" the clients by eliminating their symptoms. Dabrowski saw these same symptoms as an inseparable part of the quest for higher level development. He fervently desired to convince the profession that inner conflict is a developmental rather than degenerative sign (Silverman, 1993, p. 11). [italics mine]

Dabrowski developed a theory of positive disintegration in which he proposed that advanced development requires a breakdown of existing psychological structures in order to form higher, more evolved structures (Silverman, 1993, p. 11). Piechowski has been the principle translator of Dabrowski's work, and he has continued his own research into issues involving positive disintegration and emotional overexcitabilities (sensitivities in a number of areas of a person's emotional, intellectual, and physical being that may contribute, according to Dabrowski and Piechowski, to an increased potential for higher level inner growth). The current paper does not specifically address subjects' overexcitabilities. The use of the term "growth" in the context of the present research is intended to indicate inner change rather than a precise judgment of emotional maturity.

Dabrowski speculated that there are five fairly distinctive levels of emotional development. A summary by Piechowski and Silverman (1993), included in Chart 2, describes apparent characteristics and motivations of people at each level of emotional development. Theoretically, emotional growth, as indicated by the characteristics described in Chart 2, beyond Level II is uncommon. Evidence from the current research and in numerous assessments of Erikson's theories of identity development (Josselson, 1991; Levinson, 1978; Sheehy, 1976), indicate that the type of advanced growth described by Dabrowski is probably not found in identity foreclosure or identity diffusion, is experienced only briefly in pre-mid-life identity achievement, and most probably present when a moratorium-type crisis is experienced in mid-life. In other words, there is a great amount of evidence that few people experience their day-to-day lives in a fashion described by Dabrowski's Levels III, IV, and V. (Chart 2 is available in the original paper).

In one of his investigations, Michael Piechowski did research on gifted adolescents that examined the subjects' potential for personal growth. He found two main patterns of development. The first "resembles Peck and Havighurst's (1960) rational-altruistic type...[and] is in some ways akin to the foreclosure identity [from E. Erikson]. These individuals establish their identity without going through a developmental crisis" (1989, p. 90). According to Peck and Havighurst, such a person is

"rational" because he assesses each new action and its effects realistically, in the light of internalized moral principles derived from social experience; and he is "altruistic," because he is ultimately interested in the welfare of others, as well as himself...He wants everyone to work constructively in some area and produce results useful to everyone. He sees relations with others as pleasant, cooperative effort toward mutual goals...As an adult, he assumes an appropriate share of responsibility in his role as a member of a family, community,

nation...He reacts with emotion appropriate to the occasion. This does not mean he is unemotional, for he is enthusiastic about promoting what is good and aroused to prevent what is bad. (p. 8).

The preceding description corresponds most closely with Dabrowski's Level II. Piechowski identified a second type of personal growth that is more likely to be both troubling and transforming to the individual. Referring again to Chart 2, Piechowski appears to be describing Dabrowski's Level III and a movement into Levels IV and V. As he summarizes,

The other kind of development is personal growth guided by powerful ideals. It is characterized by moral questioning, existential concerns, and methodical self-judgment that guides the individual on the work of inner psychic transformation. This type of development, especially when intense and sustained, produces self-actualizing growth of the kind observed in spiritual leaders and other individuals of high moral character--The growth of self is a process by which a person finds an inner direction to his or her life and deliberately takes up the work of inner transformation (1989, p. 89).

After extensive analysis of the case study files, themes and patterns emerged that indicated subjects can, for ease of description, be classified by Dabrowski levels. Although Dabrowski's levels are arranged hierarchically, as an emotional maturity progression, results of the current study indicate that low, medium, or high levels, per se, are not necessarily good or bad, better or worse. The subjects in the current study are grouped and described within a description of the different Dabrowski levels so that the reader can grasp the different characteristics of people at each developmental level. It is theorized in the present research that how a person will respond to different situations in life can be predicted by their emotional characteristics.

Dabrowski went one step further than either Kohlberg or Maslow in conceptualizing his levels of emotional development; he envisioned an attainment of a personality ideal. In effect, once people are self-actualized, they aspire to define and meet their own personal goals for the kind of people they really ought to and want to be. Although such a pursuit may seem familiar to people at all the described emotional levels, the reality of the infrequency of Dabrowski's top level will become apparent in later sections of the paper.

A recent article in Roeper Review addresses the topic of self-actualizing (Hall & Hansen, 20:1, pp. 22-27). The authors refer to Maslow's Hierarchy of Needs: "The highest and most evolved motive is self-actualization, a healthy desire to be the best one can be." The subjects they identified as being the most self-actualized "were intent upon doing things to make a better world, they volunteered, tutored, and gave of themselves without much concern for financial gain" (p. 24).

According to Nelson, "Dabrowski observed that the most gifted and creative individuals with whom he worked seemed to exhibit higher levels of empathy, sensitivity, moral responsibility, self-reflection, and autonomy of thought than the general population" (1989, p. 5). Although the current investigation's results indicate that subjects exhibited a wide range of emotional maturity, almost all the subjects in the study exhibited the majority of these qualities. The one quality that was more commonly exhibited by subjects categorized in Dabrowski's "advanced" levels of emotional maturity, and concomitant indications of high-level moral reasoning as illustrated on Chart 2, is that of "autonomy of thought".

#### Moral Developmental Theorists: Kohlberg, Gilligan, and Rest

The first to take a cognitive-developmental approach to the issue of moral reasoning was Piaget. Piaget, although more well-known for his cognitive-developmental stage theories of how children learn, worked on morality research in the 1930s. Prior to his work, few had considered moral reasoning as a cognitive function but as a function of socialization. It had been assumed that "moral development was a matter of learning the norms of one's culture, of accepting and internalizing them, and of behaving in conformity with them" (Rest, 1994, p. 2). Kohlberg began to study moral reasoning in the 1950s and 1960s. He recognized the validity of Piaget's research and later argued that sometimes conformity to social norms is morally wrong, as when dutiful soldiers commit atrocities, or slavery is condoned, or entire racial or gender groups are given fewer rights by government sanction.

Kohlberg's approach is relevant for the current study in that he focused on cognition--"the thinking process and the representations by which people construct reality and meaning" (Rest, p.3). He developed a stage theory of his own that included pre-conventional thinking, conventional, and post-conventional, all three of which contained two levels. Chart 2, on page 42, includes a summary description of Kohlberg's moral reasoning stages. He tested his theories longitudinally at three year intervals on a group of men by giving them a screening inventory that posed moral dilemmas. If the stages behaved as a staircase, going up and not down, it would indicate that each stage was a higher level than the previous one. Kohlberg's initial interest was to uncover major markers in life-span development. It was always assumed that the measurement device would be accurate and appropriate if people scored higher as they matured.

Early results indicated that more men reached high conventional levels than women, and the longitudinal study was on men only. Gilligan (1982) interpreted the findings as indicative of a primary difference between the reasoning of men and women. She believed that Kohlberg's higher levels depicted a progressive separation of the individual from other people. She argued that women come from an ethic of care, and that women move from a focus on self-interests to moral reasoning based on commitment to specific individuals and relationships, and then to the highest level of morality based on the principles of responsibility and care for all people. As more and more

research with Kohlberg's theory emerged, however, it became evident that women as a group score slightly higher than men on Kohlberg's Moral Judgment Interview (Colby & Kohlberg, 1987; Rest, 1994). They also score higher on Rest's Defining Issues Test (Rest, 1994), a moral reasoning inventory.

The Defining Issues Test (DIT) was taken by all subjects in the present study. Its P-score, for "principled" thinking, has emerged in this study as an important indicator of potential for more abstract, complex emotional reasoning. Often referred to as emotional growth or maturity, in the context of this study, use of the terms emotional growth and maturity does not imply good or bad, but instead indicates a propensity or openness to change, particularly inner change. As can be seen from Chart 2, page 42, Kohlberg's moral development stages have been placed, for the purpose of the current study, alongside Dabrowski's emotional development levels. As the data analysis evolved, DIT scores that appeared to be reflective of the different stages and levels were placed between the two schemes. Subjects do not fall perfectly into the depicted DIT score ranges and Dabrowski levels; these are general ranges based on results of this study only; however, characteristics described in the different Dabrowski levels are usually present in the case studies of subjects who score within the different ranges on the DIT.

Tables 2 and 3 add perspective to the discussions of DIT scores in relation to emotional change potential. Table 1 details the group results for the current study. Table 2 lists specific group averages for the DIT accumulated from previous studies.

#### Table 2 Highly Gifted Study DIT Summary

39/41 subjects have valid DIT scores  
 Range 30 to 83.3 6 women below the average, 13 above  
 Average 57.67 13 men below the average, 6 above  
 Median 56.7 1 F/M above the average  
 Standard Deviation 13.78

#### Table 3 Norms for Selected Groups on the DIT-P Score

65.2 Moral philosophy and political science graduate students  
 59.8 Liberal Protestant seminarians  
 52.2 Law students  
 50.2 Medical students  
 49.2 Practicing physicians  
 47.6 Dental students  
 46.3 Staff nurses  
 42.8 Graduate students in business  
 40.2 College senior business and education majors  
 41.6 Navy enlisted men  
 40.0 Adults in general  
 31.8 Senior high school students  
 23.5 Prison inmates  
 21.9 Junior high school students  
 18.9 Institutionalized delinquents

Rest designed the Defining Issues Test, a machine-scorable inventory based on Kohlberg's moral reasoning stages. He counters Gilligan as he explains Kohlberg's stage theory: "I think that the best short description of the six stages is to view them in terms of six conceptions of how to organize cooperation. Accordingly, the key conception that develops over time is people's understanding of how it is possible to organize cooperation" (p. 5). "The stages do not depict the progressive separation and isolation of individuals from each other (as Gilligan said), but rather how each individual can become interconnected with other individuals" (Rest, 1994, p. 8).

The first four stages of Kohlberg's moral development scale are detailed in Chart 2. The reason it is often difficult to adequately define and describe the postconventional levels of stages 5 and 6 is that the majority of people never attain that level of reasoning themselves. Research indicates that the stages do indeed comprise a hierarchical structure where higher is better (Rest, 1994; Rest, Turiel & Kohlberg, 1969; Walker, deVries, & Bichard, 1984). The tasks in these studies of the DIT involved asking subjects to paraphrase arguments from each of the stages. Subjects were always able to paraphrase levels lower than their own but not above their own. Also, when asked, subjects could describe moral reasoning lower than their own level as immature, the way they once were, or simple-minded. Another approach to assessing the validity of a progressive stage theory was tested through a series of tasks with volunteers who were asked to "fake bad" and "fake good" on the MJJ or DIT (McGeorge, 1975). Subjects are able to fake bad because they understand the thinking that they have outgrown. They were unable to fake good.

Past research into the scoring levels on the Defining Issues Test have indicated that adults with low scores or scores that do not continue to climb with age lack intellectual stimulation in their lives (Rest, 1979). The factor most consistently found to correlate with DIT scores, furthermore, is years of education. Nonetheless, an interesting study on high achieving 8th graders, conducted by Narvaez (1993),

showed that high achievement scores were necessary but not sufficient for high scores on the DIT. None of the low achievement scores were related to high DIT P-scores, but only some of the high achievement scores were. In other words, high ability to achieve in school is necessary but not enough for high DIT scores. In an additional aspect of her study, Narvaez compared the 8th grade scores to college scores collected from a previous study, and she found that the highest DIT scores came from the identified high achievers from the 8th grade group, although the college men had the highest score average, followed by female 8th graders, then female college, and finally 8th grade males. The choice of highly gifted, well-educated, middle-aged adults was purposive in that factors other than educational level might be more easily extracted as contributors to moral reasoning growth.

#### Generational Cohort Effect

##### Strauss and Howe

The current study can most easily be compared to that of Terman, and somewhat, of Hollingworth. As the current research progressed it became evident that there might be generational and historical aspects to consider that explain some of the differences found between the study groups. It is for that reason that a rather detailed summary of Strauss and Howe's work in *Generations* (1991) is presented. The subjects selected for the final analysis in this paper were raised by Strauss and Howe's "G.I." generation and early "Silent" generation. The cohort studied by Terman and his colleagues was primarily from the G.I. generation. Strauss and Howe described the G.I. generation as a "civic" generation.

*Throughout their lives, these G.I.s [the generation born between 1901 and 1924] have been America's confident and rational problem-solvers (p. 261). Such a generation has had little thirst for spiritual conversion, no need for transcending new consciousness...valuing outer life over inner, G.I.s came of age preferring crisp sex-role definitions... G.I.s matured into a father-worshipping and heavily male-fixed generation. As rising adults, they came to disdain womanish influences on public life...The G.I.'s rift with their own children arose, in substantial part, from the refusal of the Boomer youths to accept the exaggerated masculinity of G.I. fathers (p. 264).*

*Throughout the G.I. life cycle, the federal government has directed its attention to whatever age bracket the G.I.s have occupied...produced by far the largest one-generation jump in educational achievement in American history... 1930s forward...the only generation to support the winning candidate in every election...experienced the "American dream" of upward mobility and rising homeownership more than any other generation in this century...Relative to younger generations...have been by far the most affluent elders...Recent polls show people over age 65 comprising America's "happiest" age bracket (pp. 266-269).*

Although different reporting methods could affect the fact that higher numbers of people from the current study have received counseling than Terman's subjects, it may be due more to generational viewpoints regarding personal growth and inner change. The transition in attitudes regarding self-improvement and self-development seemed to begin with the next generation.

The "Silent" generation, born between 1925 and 1942, most of whom experienced both the Great Depression and World War II as children, is considered an "adaptive" group of people. Strauss and Howe give considerable insight into this generation that seems "sandwiched" between their elders and their children:

*...Fortune magazine's editors wrote of the "gray flannel mentality" of [college class of 1949], "They are interested in the system rather than individual enterprise." Only 2 percent wished to be self-employed. Most of the rest wanted to work in big corporations offering job security ... possessing an "outer-directed" personality and taking cues from others...facilitators and technocrats--a consummate helpmate generation which has so far produced three decades of top Presidential aides...But no presidents...The Silent widely realize that they are the generational stuffings of a sandwich between the get-it-done G.I. and the self-absorbed Boom...the Silent have enjoyed a lifetime of steadily rising affluence, have suffered relatively few war casualties, and have shown the twentieth century's lowest rates for almost every social pathology of youth (pp. 279-281).*

*Lacking an independent voice, they have adopted the moral relativism of the skilled arbitrator, mediating arguments between others--and reaching out to people of all cultures, races, ages, and handicaps...America's greatest generation of comedians, psychiatrists, and songwriters. Yet this very malleability has left the Silent with badly checkered family lives...a significant number of divorced women who never remarried...the Silent lifecycle has been an escalator of prosperity, offering the maximum reward for the minimum initiative...earliest- marrying and earliest babying...in American history...biggest age-bracket jump in the divorce rate...From 1969 through 1975, as the Silents surged into state legislatures, the number of states with "no fault" divorce laws jumped from zero to forty-five...The era of Silent-dominated juries roughly coincided with the rise of huge demand awards in personal injury cases...Opinion rules, but the Silent hate to admit that any rule is final...lifelong bipartisan attraction to Presidential underdogs...A 1985 study found the fiftyish Silent preferring "the twenties" over any other decade in life--fueling a market in dietary aids, exercise classes, cosmetic surgery, hair replacements, relaxation therapies, and psychiatric treatments (pp. 282-286).*

In contrast, the "Boomer" generation born 1943 to 1960, is an "idealist" group. More than half the subjects in the current study are from the first wave of the following generation.

*...As Boomers have charted their life's voyage, they have metamorphosed from Beaver Cleaver to hippie to bran eater to yuppie to what some are calling "Neopuritan"...Their first cohort, the 1943 "victory babies," have thus far ranked among the most self-absorbed in American history...From VJ-Day forward, whatever age bracket Boomers have occupied has been the cultural and spiritual focal point for American society as a whole...Arriving as the inheritors of the G.I. triumph, Boomers have always seen their mission not as constructing a society, but of justifying, purifying, even sanctifying it...the G.I.s taught Boomers critical thinking...even in early childhood, Boomers showed an "orientation to principle"...This quest for "self"--what Gitlin has termed "the voyage to the interior" and Christopher Lasch (more critically) the "culture of narcissism"--was a central theme...manifested itself in that distinctly Boom sense of suspended animation, of resisting permanent linkages to mates, children, corporations, and professions (pp. 301-302).*

*Boomers have excelled at occupations calling for creative independence-- the media, especially...Exalting individual conscience over duty to community (p. 303).*

*...in the late 1960s, Keniston encountered "an unusually strong tie between these young men and their mothers in the first years of life." ...rates for every form of accidental death rose sharply--and the rates of drunk driving, suicide, illegitimate births, and teen unemployment all doubled or tripled...Crime rates also mounted...the effort to avoid service in Vietnam was a more pervasive generational bond than service in the war itself...migrated out of mainline "established" churches, but surged into New Age and evangelical sects...Were it not for dual-income households, Boomer family incomes...well below what the Silent earned at like age...Boomers evenly split over whether they are doing better or worse [than their parents]...they overwhelmingly consider their careers better (by a five-to-one ratio), their personal freedoms greater (by six to one), and their lives more meaningful (by nine to one) (pp. 305-307).*

### Summary

Rather than attempt to cover all the research literature on high giftedness, talent development, development in the areas of cognitive emotional and cognitive moral reasoning, and historical context, the review instead focused on the findings that either guided or helped explain the current research. The review of the literature has concentrated on those aspects of each conceptual framework that specifically underscore the research presented in this paper.

According to the research cited, high giftedness is primarily inborn and manifests itself as much as a personality characteristic as it does a learning ability. Highly gifted people think more complexly, learn new material faster, and are generally more successful at training for and maintaining successful careers. Their high intelligence, however, does not make all gifted people more able than nongifted to solve their own emotional and social problems, as is amply borne out by analysis of the current subject pool. Furthermore, highly gifted people often experience considerable difficulty during their childhoods in finding compatible friendships and in developing a clear sense of who they are and how they fit in. This is consistent with Festinger's social comparison theory (1954) which states that people construct their sense of who they are through comparing themselves to other people. An overriding theme of the current study is this ongoing difficulty experienced by the highly gifted subjects in figuring out how they fit in.

Research on talent development underscores the need for even highly capable individuals to receive individual attention and practice in their talent areas, another theme strongly evident in the highly gifted study group. There is considerable evidence that high achievers in nearly every field had someone who guided them or provided opportunities for training and encouragement. Most often, these positive opportunities have come directly through the families of the high achievers.

High giftedness probably does move most individuals up any developmental scale sooner, and perhaps more often, than nongifted age-mates. There are factors other than giftedness, however, that are necessary for higher level growth in emotional and moral reasoning areas, and the eventual levels of openness and complexity that some individuals experience as self-actualization. The present research represents an effort to identify factors that may either sabotage or enhance higher level, that is, more complex, emotional and moral reasoning. Rest describes in detail the kind of people who score highest on the DIT. The description resonates with that of the self-actualized person described by Maslow, as well. Although it leaves out any hint of the torment of the positive disintegrations in Dabrowski's theory, it gives a good picture of the goal:

*The people who develop in moral judgment are those who love to learn, who seek new challenges, who enjoy intellectually stimulating environments, who are reflective, who make plans and set goals, who take risks, who see themselves in the larger social contexts of history and institutions and broad cultural trends, who take responsibility for themselves and their environs. On the environmental side of the equation, those who develop in moral judgment have an advantage in receiving encouragement to continue their education and their development. They profit from stimulating and challenging environments, and from social milieus that support their work, interest them, and reward their accomplishments. As young adults, the people who develop in moral judgment are more fulfilled in their career aspirations, have set a life direction of continued intellectual stimulation and challenge, are more involved in their communities, and take more interest in the larger societal issues. This pattern is one of general social/cognitive development (Rest, 1986, p. 57). [Emphasis mine]*

Based on results of the current research, it can be argued that the self-actualized person, one with the personality or emotional

characteristics described by Maslow, Dabrowski, and Rest, exhibits all of these strengths and tendencies after achieving advanced emotional growth. As shall be shown, not all subjects who are advanced emotional and moral reasoners experienced encouragement. Dabrowski noted that “they were often able to find it unaided” (Dabrowski in Piechowski, p. 236). The data in the current study support a theory that there are both internal and external factors that lead to advanced levels of emotional and moral reasoning. Furthermore, as the analysis of the case study material progressed, it became evident that there is reason to consider “advanced level” emotional and moral reasoning levels not necessarily “better” or desirable for everyone. It is mentioned above that “higher is better”, but judging from the kinds of lives the different subjects are leading, and the happiness and contentment often reported by subjects at “lower” levels, it is important to keep an open mind about what advanced level emotional growth is and is not.

## CHAPTER VII

### CONCLUSIONS AND IMPLICATIONS

#### Background

The backgrounds of 41 highly gifted adults were explored through analysis of case study self-reported, anonymous questionnaire responses. The primary purpose was to gain a better understanding of how the treatment and attitude from home, school, and community influence the overall developmental outcomes of highly gifted children. Specifically, was it possible to pinpoint factors critical to turning highly gifted children into productive, emotionally healthy adults?

The research was guided by an early assumption that the type of feedback the subjects receive from others is vital to their self-concept and self-esteem. For example, individuals learn about themselves, their self-concept, through their own comparisons of themselves to others and from the feedback and nurturing they receive from others. They learn whether or not to value themselves according to the feedback and nurturance they receive. It was further assumed that because high giftedness is not typical, many of the people closely involved with the subjects would be unprepared to provide them with feedback and explanations that would be helpful in guiding these children toward healthy self-concepts and self-worth.

A final consideration was the issue of how high intellectual level may inhibit or enhance the development of complex, high level emotional growth and moral reasoning. Was there evidence that the environmental effect of parents, family, school, and community contributes or detracts from the eventual achievement of good use of intellect while building an emotionally intelligent, emotionally healthy adult? As corollaries, how was emotional maturity related to either inner growth or moral reasoning growth, and if related, how was principled, high level, moral reasoning developed? How was it manifested? How common was high emotional and moral reasoning among highly gifted people?

A critical difference between this and other studies was the exploratory nature of the data gathering and analysis. According to Kram, “Theory is generated through new hypotheses and research questions that emerge as the primary data collection effort is proceeding” (p. 41). In other words, the research began with a working theory that highly gifted students need to be appropriately paced in school and placed with children who think at their own level. It was also assumed that highly gifted children need help figuring out who they are in the context of being different from so many around themselves due to their high giftedness. As the data collection and analysis proceeded, however, significant others in the child's life, or as Greenspon calls it, “essential others” (p. 163), emerged and were considered as salient influences in the lives of the highly gifted, as well.

#### Conclusions and Discussion

##### School and Community Environment

School experiences, as emphasized in Chapter IV and detailed in the case studies, were the most similar experiences among the 41 subjects. When subjects had friends, and most of them did, their closest friends were also bright children. Many subjects had relationships with children not quite as bright as they, but with whom they shared extracurricular interests such as athletics, music, scouts, or drama. The only subjects who listed considerable information about their problems with other students in school came from homes that were described as neglectful, hostile or rejecting. Not all students from troubled homes experienced difficulty with school friendships, however. Two subjects who came from rather positive homes, #3F and #5M, did well with other children but had some problems with teachers, both related to circumstances where the teachers apparently resented the student.

Most subjects mentioned frustration with the academic offerings and pacing at their schools. No one experienced radical acceleration or grade skipping, and none expressed regret over it. Three girls were in full time gifted programming and a number of subjects participated in tracked classes by high school. All of those who experienced ability grouped classes enjoyed the challenge, the coursework, and fellow students. Only one woman said she regretted being in a gifted program, not due to the coursework but because she was average in the group, not a “star” anymore.

Of the several men and women who described very negative experiences at school, only one man and one woman wrote that they internalized the negative treatment and felt very bad about themselves. Both came from very negative home environments. The woman, #35F, eventually progressed emotionally away from the pain and bitterness of her past; the man, #27M, still has not.

Although there was a question on the Childhood Questionnaire for subjects to tell how their communities honored good students, most

answered that it was mostly sports that received attention. Most also indicated that it did not really bother them one way or another.

The most common suggestions from the subjects for how to improve school experiences for people like themselves are as follows:

There should be opportunities from kindergarten onward to work, play, and learn with other similarly advanced children. No one suggested this need be for every minute of every day.

Intelligent teachers who love their subjects and students were mentioned often. Also, numerous subjects mentioned that teachers should not compete with or be hostile to bright students.

A majority of the subjects mentioned a desire to be excused from subject matter that they already knew.

### Family Environment

Although more than half the subjects, 56%, describe their own experiences in their childhood homes as emotionally abusive, only one subject reported that the abuse in her home drew attention from the authorities. For this reason, it is not possible to accurately compare the incidence of abuse in the homes of the highly gifted subjects to the incidence of abuse in a normative sample. In a few cases, subject childhoods included physical abuse.

The environmental and familial factors strongly affected the subjects' sense of self-worth and general happiness in their early years. The subjects who entered their middle years as the most emotionally miserable generally came from strongly emotionally abusive backgrounds where one or both parents were hostile and rejecting. Nonetheless, there are several subjects, most notably #16M and #18F, who struggled with existentialist questions on their own despite generally supportive household environments. Of the subjects who eventually advanced to high emotional development levels, even those with background abuse, most could name at least one person who cared about them. Although a caring person from the past did not guarantee advanced emotional development, the lack of the subject's perception of a caring person was a common factor among all subjects who exhibited great hostility and received low Tone scores. Few subjects give specific credit to any one person, group of people, or circumstances that gave them their sense of worth or happiness, although numerous people are credited with making the subject feel they must be worth something.

### Career Success

The subjects were not selected for this study based on personal eminence or unusual achievement but simply by their intellectual level and age cohort. Because the subjects are all younger than 60 years old, eminence may still be in the future for a number of them. Therefore, a definitive assessment of subjects "living up to their potential" ended up being assessed primarily by whether or not the subjects themselves felt they were successful. The IQ levels of the current subjects are equivalent or superior to the mathematicians and neuro-researchers in *Developing Talent in Young People* (Bloom, 1985) and probably commensurate with or superior to the majority of people profiled in *Cradles of Eminence* (Goertzel & Goertzel, 1962) and *The Early Mental Traits of Three Hundred Geniuses* (Cox, 1926).

Despite the fact that 56% of the subjects experienced degrees of emotional mistreatment, or even negative, neglectful, hostile, or rejecting parents, every one of the subjects finished at least a four year college program, and all but one subject has worked at jobs requiring considerable competency. Subjects who experience educational and career success come from every type of parenting and every type of school, and also fall into all levels of emotional development. In other words, in the current study, a career choice need not preclude inner growth, and a nurturing positive childhood does not guarantee eventual inner growth.

Although all subjects in the present study who have not reached a recognizable degree of career success come from abusive backgrounds, there are many subjects categorized as abused who achieved career success. Subjects who fall into the low career success description are found at all emotional development levels. In other words, there are some formerly abused subjects who managed to grow and develop to higher emotional levels but who still are not obvious career achievers. In the context of this study it can be concluded that career success and inner self-actualization are not highly related, yet neither are they exclusive to one another.

### Who Becomes Self-Actualized?

Fully 44% of the study subjects gave evidence that by their middle years they had moved at least somewhat past the developmental stage that can best be described, since most American adults are at that level, as "normal". Most subjects who are past the normal, conventional level scored above 60 on the DIT. (Refer to Chart 2). According to Rest's summary of group norms (see Table 3), the typical American adult averages 40 on the DIT. Both Maslow and Dabrowski postulated that most people do not progress past a conventional level of reasoning. It is reasonable to assume, therefore, that the attainment of self-actualization levels by nine of the study subjects, 22%, is above the average for an unselected, random population. In fact, if the average for adults in general is 40, highly gifted, highly educated adults do more often reach higher levels of emotional and moral development than adults in general.

The most obvious conclusion of this research was that being highly gifted and over 40 years old does not guarantee high levels of emotional or moral reasoning growth. A recent article in *Roeper Review* addresses the topic of self-actualizing (Hall & Hansen, 20:1, pp. 22-27). The authors refer to Maslow's Hierarchy of Needs: "The highest and most evolved motive is self-actualization, a healthy desire to

be the best one can be.” The subjects they identified as being the most self-actualized “were intent upon doing things to make a better world; they volunteered, tutored, and gave of themselves without much concern for financial gain” (p. 24). Not often explained in conjunction with such definitions is that there is a subtle distinction between good behavior that is motivated by a need for approval, personal promotion or gain, and good behavior that is motivated by an intrinsic drive to improve things for people. For the emotionally self-actualized, receiving credit became less important than achieving results and positive change.

Analysis of the data revealed that the subtle distinction between good behavior that was motivated by a need for approval and recognition and that which was intrinsically motivated was largely identifiable by DIT score ranges. The career self-actualizers had a number of identifiable characteristics. They had products and accomplishments, awards and busy schedules. People who were career actualizers without the inner transformation that was the hallmark of higher, more open and complex, emotional levels tended to score lower than the study group average, below about 60, on the DIT; and they also tended to be at the conventional or stereotypical stages of development, as described in Chapter IV. Their approach to making life choices and problem solving in general has been captured by this study's terms “Nonsearcher” and “Neutral”. The data analysis looked for wording indicating that they find satisfaction and happiness in their accomplishments and tend to recognize their worth as achievers and doers. In fact, a large number of subjects at this level of development received Tone scores of 1 and 2 and led very stable lives. So, even without inner transformation, these were people who appeared to “live up to their potential.”

The self-actualizers who have experienced inner, emotional growth tended to score higher than the study group average on the DIT. The most satisfied and secure members of this group have case studies that support descriptions of Levels IV or V in Dabrowski's emotional development schema. All such subjects gave evidence that they had not always been satisfied and secure, but that it was something they developed. High scores, generally scores over 65 on the DIT, appeared to indicate a strong potential for the highest Dabrowski levels; high DIT scorers fit the current study's category of Searchers. When unhappiness and depression were present in high DIT scorers, it generally indicated the subject had not achieved inner, emotional self-actualization but was actively struggling with it. To use Dabrowski's terminology, they were undergoing personality transformation and perhaps experiencing positive disintegration, as well. The unhappiness and depression should lift and become less common as the subjects move into a clearer sense of self and purpose, as in Dabrowski's Level IV or Maslow's final stage of emotional growth. Many call this advanced development or emotional maturity (Advanced Development Journal, 1989).

#### Self-Actualization and the DIT

The DIT was significantly correlated with Dabrowski levels in the study subjects at  $r = 0.851$ . Future research is needed to establish whether or not the DIT scores for a random group of subjects, not just highly gifted, would be indicative of the same developmental levels described in Chapter IV of this paper. The DIT scores were definitely higher for this highly gifted group than for most of the groups listed on page 47 normed for Rest's (1993) table. The present research is the first to delve into descriptions of people who score at different levels on the DIT. Just as the scores were higher, the proportion of people who have moved beyond conventional levels was also unusually high. Based on these findings, it seems possible that advanced emotional and moral reasoning levels are more often accessible to the highly gifted than to a normal population. The fact that not all members of the study group made such progress, however, indicates that intelligence helps but does not guarantee such progress.

#### Personal Factors

Subjects who have grown emotionally beyond the normal, conventional levels of most American adults all described disappointment and confusion as a precursor to their inner changes. Apparently part of their “Personality Transformation” included a new perspective on other people, as well. Nearly all of the subjects who were described at Dabrowski Levels III/IV and above indicated good social/emotional intelligence. Analysis of the subject files and case studies indicated such emotional intelligence was deliberately and often painstakingly acquired later in life.

Only through future research can it be determined what personal, perhaps inherent, factors may contribute to eventual self-actualization in individual people. It is clear that there are identifiable characteristics present in people at different levels of development. How early they reach a level, and whether or not they will continue to progress to the highest stages, cannot be concluded from the present study. Only one subject showed attitudes and behavior that differed significantly from his DIT results, subject #36M. He took a two year break before finishing the study and reported that he underwent significant internal changes. The questionnaire dealing with his childhood was completed at the same time as his first DIT, on which he received a 48.3. His clear change from probable Nonsearcher to Searcher by the time he completed the adult level inventory indicates that there are self-actualizers who did not begin life as natural Searchers. If they did not begin life, or even their adulthoods, as Searchers, that means something can happen to turn a person into a Searcher and increase the likelihood of self-actualization. What that something is did not become clear with the present data analysis.

#### Why Inner Growth Matters: A Discussion

Two considerations stand out as important when one evaluates emotional self-actualization. First, people who have reached levels of self-actualization feel good about themselves, their lives, and the world around them. They are generally hopeful and have positive attitudes

toward others. They are not generally depressed and they have a natural drive to contribute through their efforts.

People who are at Kohlberg's Level 6, "Universal Ethics," and those who are self-actualized as in Maslow's description, do not rely on rules or laws but recognize that most laws are good guidelines for general behavior. People trust and assume that our rules, mores and laws were designed by people who care about all of us. It is the people who fit the description of unselfish, that is, people who can look at what is truly good for and best for the most people, who fit the definition of self-actualized. They have reached a point where they intuitively know that they will be better off in life when everyone else is, too. These are the people who can say, "This is wrong," and explain why. Something is not right or wrong because a god or a lawmaking body say so. It is right or wrong because of the effect it has on our lives, our relationships, our sense of security, health, and well-being. There are ripple effects to what is right and what is wrong, and self-actualized people can see them and articulate them more often and more clearly than non-self-actualized people.

### Limitations

A number of issues limit the general usefulness of the current study. Included among them are the imprecision of the case study analysis approach, the lack of agreement in the wider community regarding what constitutes giftedness, the snapshot approach to the subjects' assessments, the self-selection inherent in research taking volunteer subjects, and lack of more than one rater for a number of highly subjective evaluations.

The subjects in the current study participated through self-reported questionnaire responses and self-reported ability scores. The range in their intellectual levels, ages, and background experiences were large in comparison to the modest sample size. As a result, trends rather than definitive conclusions can be drawn from the present data analysis. Any attempts to categorize subjects by IQ was abandoned due to the range of testing instruments and the circumstances and ages at which the subjects were evaluated. It was assumed for the study that none of the subjects was substantially less intelligent than their submitted scores suggested; but it was further assumed that a significant number might be more intelligent than their scores suggest (Silverman, 1993).

A snapshot approach to subject analysis limits a study. Although the subjects filled out two lengthy questionnaires, most of the writing was done within a relatively short time period. Whatever stage of growth was present at the time of writing was likely reflected in the way the subjects described past and present experiences. In fact, the Tone of the subject's writing was an assessment of the subject's general approach and mood. The most obvious real loss in this snapshot approach is the inability to assess change, if and when it occurred, and perhaps, how it occurred.

Possibly the most critical limitation is the fact that there was only one rater analyzing huge amounts of data and selecting a qualitative, highly subjective, methodology. Additionally, the research is so very personal by nature that the reader may well question the objectivity of the researcher. In part to counter this last concern, the case studies have been included in the appendix; nonetheless, it is entirely possible some information which some would deem significant has been omitted in these summaries.

### Implications and Recommendations for Future Research

Experience with this study cohort has shown me that a reasonable longitudinal study of emotional growth could begin at about age 30 and continue at five year intervals until 60 or 65 years of age. In the absence of a longitudinal study, the next best approach would be to analyze a separate younger highly gifted group and a separate older highly gifted group. The affects of historical context would likely jeopardize direct comparison, a problem that could be diminished by studying the same group longitudinally.

The current approach to advancing ethical reasoning development is through classes that include tackling dilemmas, similar to the DIT format. The current research shows that ethical development, at least as measured by the Defining Issues Test, is closely tied to emotional development. That being the case, what changes might benefit the parenting and educating of highly gifted children to maximize their emotional adjustment and growth? Also, does what works for highly gifted children work for all or most children?

A number of questions remain to be answered, and it will require further research to do so. What affects the development of the individual, not just the group? Is it possible that highly gifted children with moral and emotional development that is more advanced than their age-mates become so disillusioned with others that their own development is arrested? Also, smarter people tend to get more education than others. Why have more highly gifted women than men, at least in this study, attained advanced moral and emotional reasoning levels? Is there a minimum intellectual level associated with advanced levels of moral and emotional development? Is there a minimum age associated with advanced development?

In conclusion, to whom should the answers to these questions be presented? Who should teach and guide whom? The very nature of self-actualized growth and advanced moral reasoning may preclude either concept being understood well enough for teaching to children, young parents, or even teachers. Perhaps what parents, teachers, and children need to know is that there is the possibility of an emotional journey and it involves feelings of instability and struggle along the way. They can be taught what the typical milestones are, and what their life goals may be as well as the reasons for establishing those goals.

This is only the first three chapters of the actual dissertation. If you are interested in purchasing an entire copy, including the case studies themselves, the cost for the bound copy and shipping and handling is \$35; a PDF file copy is available for \$15. You may make the credit card and mailing arrangements by using the following link:

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