On The Nature of Giftedness and Talent: *Imposing Order on Chaos*

Martha J. Morelock

In recent years, there has been a move away from IQ as the accepted gauge of "giftedness" with a concomitant embracing of multiple concepts of talent. Some in the field welcome this diversification, heralding the changes as portending a shift to a more humane and democratic view of human potential with "talent development for all children" becoming an inspired and laudable goal. Others decry what they see as too hasty a dismissal of the needs of "the gifted child." The field of gifted education thus finds itself in a morass of confusion. Fragmented by ideological differences and a lack of consensus regarding fundamental definitions, it has as well become charged with intense emotion.

This article traces the development of the confusion enveloping the field today. It finds its roots in the very beginnings of the modern study of giftedness and talent and charts its evolution through to the establishment of two contemporary opposing Movements: the Talent Development Movement and the Columbus Group Movement. It is argued that these two Movements exemplify the culmination of two strands of research, theory and practice—"the gifted achiever" strand and "the gifted child" strand. Vygotskian theory is proposed as providing a conceptual framework which can accommodate what has been learned about giftedness and talent since the advent of IQ testing, resolve differences in the field by providing an overarching theoretical synthesis, and orient us toward future directions for research and practice.

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. . . . . in the end the truth will be admitted and utilized as everything is finally utilized that has power to bring order to human life.

- Leta Stetter Hollingworth, 1939
(as cited by Silverman in *Roeper*, 1995, p. vii)

The issue which this article addresses is one that has followed its author for the last decade and has plagued the fields associated with the study of giftedness and talent for even longer. ***Who*** are the gifted and ***who*** are the talented? And are the two categories mutually exclusive? When we seek to meet the needs of "gifted" and "talented" children, what does that ***mean***?

In the United States, these questions have developed into such a controversy that there are those who advocate totally doing away with the word "gifted," which they see as an elitist concept and, instead, talking about "talent development" for all children. Others advocate a relativist position, asserting that giftedness is a social construct (Borland, 1996). Along this line of thought, one might conclude that whatever child performs above the average level of his or her age peers (no matter how poorly those age peers perform) in some area that is culturally valued (no matter what it is) is "gifted." Or perhaps, since "giftedness" is merely a social construct (Sapon-Shevin, 1996), it should be relegated along with, say, "unicorns" to a category of entities of dubious reality.

And what is ***talent***? Over the years, depending on who was addressing the issue, "talent" has gone from denoting a remarkable ability falling somewhat short of superlative (Hollingworth, 1926) to specialized aptitudes assumed unrelated to general intelligence, such as those in music or art, to a generalized concept meant to replace the more offensive ***gifted.*** After all, ***all*** children have talents that can be developed — children formerly known as "gifted" could simply take their place among the various other multiple talent possibilities as the "academically talented." Surely ***that*** will satisfy everyone! Or perhaps one should just avoid the whole issue. Whenever one mentions the term "gifted," just make sure that it is followed immediately by "talented" in the hope that the two terms together will cover all related combinations and permutations and no one will question anything.

For a field that hopes to be taken seriously, this is a deplorable situation. Certainly, such a "house divided against itself" with regard to foundational concepts cannot hope to garner the respect of professionals in other fields and to be regarded as having something of importance to contribute. Meanwhile, within the field itself, practitioners become so confused that they are fair game for any new fad that comes along. Parents looking to "the experts" for counsel struggle for some way to advocate for the needs of their particular children, who may not be displaying the type of giftedness or talent most favored at a particular point in time. Budding professionals in the field face an identity crisis. And, as always, the children whose needs are yet again left unmet are the ones who are victimized most.

How did we arrive at this morass of confusion? The thesis presented here is that if one can cut through the politics long enough to dispassionately consider what has been learned over the years since the advent of IQ testing, there is some order and sense that can be discerned. This discussion targets three objectives: First, it is the aim of this article to reflect back on the history of the field and the evolution of its theoretical concepts and, by so doing, to get some perspective on how we came to be in our current situation. Second, we will take stock of the solid empirical knowledge accumulated over the years through the efforts of those committed to the study of giftedness and talent. In the interest of carefully constructing a developmental understanding spanning a number of decades, we will begin at the beginning of the modern study of giftedness and talent. Based on these findings, implications will be drawn for current thinking, practice and research. Finally, a devel-

opmental theoretical framework will be suggested which can accommodate all that has been learned about the nature of giftedness and talent over the years and orient us towards the future.

Completing all of the above objectives would be quite an ambitious undertaking for a several volume series of books, let alone a journal article. I would like to make it clear that in tracing the history of concepts and findings in the field, I will not aim to be exhaustive. Indeed, probably to the annoyance of some readers, I may entirely leave out of the discussion a number of those personal favorites who are recognized as making contributions to the field. I will go about this as an impressionistic painter would go about rendering a image. Some details will be left out in the interest of tracing holistic patterns of continuity and change in the flow of ideas and identifying major points of origination and critical disjuncture.

The picture that emerges based on selective events will of course be my construction. But this is, after all, the nature of the role played by all historians. In the last analysis, what really matters is if the resultant framework is helpful in creating understanding, generating harmony, and charting a future course for the field.

The Cosmic Egg of Modern Research Into Giftedness and Talent: Galton, Binet, Terman, and Hollingworth

I designate the combined seminal contributions of Frances Galton, Alfred Binet, Lewis Terman, and Leta Hollingworth "The Cosmic Egg of Modern Research Into Giftedness and Talent" for a specific reason: the work of these researchers formed a germinal seed—an undifferentiated mass of conceptual understanding with potential for spawning a number of contrasting and contradictory paths for research and practice. In the interest of constructing a developmental understanding spanning a century, I go back now to the origination of the cosmic egg.

Francis Galton

In 1869, the publication of Francis Galton's *Hereditary Genius* marked the beginning of the systematic study of individual differences and extraordinary achievement—operationally defined by the author as the attainment of eminence. It was in *Hereditary Genius* that the connection between achievement in adulthood and its assumed precursors embodied in the form of "gifted children" was first made. Galton's central emphasis on the hereditary forces in the emergence of genius is well-known. Less remembered is the fact that he recognized as well the role of environment in nurturing or stifling talent. Thus, in a discussion of eminent men of science, he notes:

> *It therefore appears to be very important to success in science, that a man should have an able mother. . . Of two men with equal abilities, the one who had a truth-loving mother would be the more likely to follow the career of science; while the other, if bred up under extremely narrowing circumstances, would become as the* ***gifted*** *children in China, nothing better than a student and professor of some dead literature. (Galton, 1869/1952, p. 189) (emphasis added)*

Galton made it clear in the above comments that, in his view, men of genius are those who actively accomplish and achieve in the world. He would regard the mere attainment of academic erudition (i.e., being "a student and professor of some dead literature") as a failure in outcome. Galton used the term "gifted" to refer both to children showing the potential for such active achievement and to adults having demonstrated it. Thus, mulling over the impact of environment on the fruition of talent, Galton notes:

> *It is, I believe, owing to the favourable conditions of their early training, that an unusually large proportion of the sons of the most* ***gifted*** *men of science become distinguished in the same career. (Galton, 1869/1952, pp. 189-190) (emphasis added)*

It is a curious paradox that in spite of Galton's less than enthusiastic regard for academic talent, his successors eventually redefined "giftedness" exactly in those terms—with one minor but crucial additional change. . . .

Binet and Terman

With the advent of the Binet-Simon scale of 1908 and Lewis Terman's subsequent extension of it into what he saw as the upper ranges of intelligence, the gifted child became the child who, in those kinds of abstract, logical, and judgmental reasoning abilities required in school settings, performed at a level commensurate with the typical child who was chronologically older. Thus, the concept of "mental age" (as opposed to chronological age) came into being. In considering the importance of his predecessor's contribution, Terman said of Binet:

> *The fact is that previous to the publication of Binet's 1908 scale the significance of age differences in intelligence was very little understood. Psychologists were not aware of the extraordinary and detailed similarity that may exist between a dull child of twelve years and a normal average child of eight. No one recognized the significance, for future mental development, of a given degree of retardation or acceleration. . .*
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> *The value of the Binet method in the identification of the intellectually gifted became immediately evident to the writer when. . . .he made trial of the 1908 scale. It was obvious that children who showed marked acceleration in mental age were, by any reasonable criterion, brighter than children who tested at or below their chronological age. A little later Stern's suggestion looking toward the use of an intelligence ratio, or quotient, refined still further the method of Binet and made possible more accurate comparisons of children of different ages (Terman, 1925, p. 3).*

It is obvious in retrospect that Terman made a leap in reasoning in which he assumed that the developmentally advanced child was a child possibly destined for genius or near-genius-level achievement. Indeed, this assumption was revealed through his choice of title for the series of volumes documenting the findings from his longitudinal study of children above 140 IQ: *Genetic Studies of Genius* (Terman, 1925). The title remained in use for 70 years, only being discontinued with the publication of the sixth volume of the series in 1995 (Holahan & Sears, 1995).

As Terman continued to follow his gifted group into mid-life "to see what kind of adults they might become" (Terman, 1954, p 23), it became apparent that non-intellective factors played a role in determining whether gifted children would become extraordinary achievers. It took more than an impressive intelligence quotient to produce extraordinary achievement. There was the matter of family support and nurturance of ability as well as an individual's drive to excel. Terman concluded that more research was needed in order to fully understand the dynamics producing extraordinary achievement.

Leta Stetter Hollingworth

While Terman's main goal was the selection of those who would perform and achieve, Leta Stetter Hollingworth's emphasis was placed on how best to pro-

vide for high IQ children educationally, socially, and emotionally (Witty, 1951). In so doing, she became deeply aware of the social/emotional difficulties emerging out of the disparity between these children's advanced awareness and the emotional needs that they shared with their agemates. Hollingworth found that the problems increased as the disparity between mental age and chronological age became greater. Thus, she notes in her book, *Children Above 180 IQ*, "To have the intelligence of an adult and the emotions of a child combined in a childish body is to encounter certain difficulties" (Hollingworth, 1942, p. 282).

Hollingworth used various terms in referring to these children. She referred to them as "rapid learners" in discussing educational provisions. Following Terman's example, she also referred to them as "gifted." She assumed that they had the potential to be leaders in society and that it was those who nurtured them who were responsible in determining whether this would indeed be the outcome of their development. She specifically chose not to refer to these children as "geniuses," pointing out that first, there was no agreement on the meaning of that word and second, all that was really known about these children was that they were extreme deviates from mediocrity in general intelligence (Hollingworth, 1942). Thus, in the writings of Hollingworth, as in the writings of Galton and Terman, the use of multiple terms and vague referents seems to reflect a less than precise concept of exactly what ***giftedness*** is or should be.

The Undifferentiated Themes in *the Cosmic Egg* of Giftedness and Talent

As can be seen from the discussion above, beginning with Terman, there was a confusion of two themes in writings about "the gifted child." The first theme identified "giftedness" as an unusual generalized capacity for judgment and abstract reasoning revealing itself in childhood. The primary significance of this was thought to be that it presaged extraordinary adult achievement across fields of endeavor. The second theme acknowledged "giftedness" as intellectual development surpassing that expected for a child's chronological years. This resulted in emotional vulnerability and educational and social needs different from those of agemates. These two themes have, over the years, evolved as two intermeshed strands of thought and work. They have also emerged as two value-laden rationales, each providing an optional lens through which one can view the whole notion of gifted education (See Borland, 1989, for a discussion of the "National Resources" vs. "Special Educational" rationales for gifted education). In the next two sections, each of these strands will be differentiated and discussed further. For these purposes, they will be designated as (1) the "gifted achiever" strand and (2) the "gifted child" strand. For the sake of clarity, they will be discussed as if they were separate in their evolution .

The Gifted Achiever Strand: The Evolution of Ideas and Empirical Evidence

Over the years, a number of forces have helped to shape the development of the gifted achiever strand. Since Terman's erection of the IQ monolith, wave after wave of opposition has crashed against it, eroding and chipping away at its credibility. The Terman study itself provided the first research raising questions about the effectiveness of IQ alone in selecting out children who would become extraordinary achievers. With J.P. Guilford's address to the American Psychological Association in 1950, awareness of creativity as an important factor in notable achievement was raised and efforts were launched to develop creativity tests that could select out individuals capable of creative thought and contributions (as opposed to the convergent thought argued as being reflected in traditional measures).

With the 1954 Supreme Court decision to desegregate public schools and the consequent emphasis on equality of human beings and their education and opportunity, IQ came under further attack for being biased against some racial minorities and the socio-economically depressed (Tannenbaum, 1983). The growing push for egalitarianism and a broadened view of valued human abilities was reflected in a congressional mandate issued in 1970. Targeting "gifted and talented children" as recipients of special federal assistance, it broadened the definition of eligible children to the upper 3 to 5 percent of school-aged children showing outstanding promise in six categories of giftedness: general intellectual ability, specific academic aptitude, creative or productive thinking, leadership ability, visual and performing arts, and psychomotor ability (Marland, 1971). In addition, new gifted programming models began to be devised with an aim towards being more inclusive, more targeted on performance-based criteria for identification, and less focused on ferreting out academic excellence alone (Renzulli, 1979a; 1979b; 1980).

Efforts to Rejuvenate the Field

In the mid-1970's, the Social Science Research Council embarked on an effort to rejuvenate the field of giftedness and creativity research, and a group headed by Robert R. Sears was convened to consider the issue (Feldman, Csikszentmihalyi, & Gardner, 1994). Sears had spent his life close to the Terman study, having been one of Terman's gifted children himself and, upon the death of Terman and at Terman's request, having taken over the research directorship of the longitudinal study. The group was convened to give new direction to the field of research on the study of giftedness, but ran into problems because of a stand-off between those in the group believing that the field had to make a radical shift in emphasis if it were to thrive, and others who believed that the basic approach of the field (psychometric and IQ-based) was sound, but should be expanded into areas neglected in its first half-century. When it was disbanded after three years, a subgroup of the original committee consisting of three developmental psychologists—David Henry Feldman, Howard Gardner, and Howard Gruber—met independently and decided to start a new committee with a developmental emphasis and oriented toward the study of great giftedness and creativity.

It was through this second committee that a number of scholars came into play in "re-charting" the field of giftedness research who were later to become well-known names in the talent development movement—e.g., Robert J. Sternberg (1985; 1988) Mihaly Csikszentmihaly (1990), and Jeanne Bamberger (1982; 1991). In addition, a number of publications were either directly or indirectly spawned by the committee and its founders (e.g., Feldman, 1982; Horowitz and O'Brien, 1985; Sternberg and Davidson, 1986; Wallace and Gruber, 1989).

In the latter 1970's, Feldman released his studies of child prodigies, showing that these children did not exhibit across-the-board extraordinary performance. Indeed, they could show extreme prodigious achievement in such areas as chess or music composition and yet fall within the typical range of variation in the more general developmental

levels of logic, role taking, spatial reasoning and moral judgment. Giftedness, asserted Feldman, was "domain-specific" and could not be accounted for by some generalized umbrella concept such as IQ (Feldman, 1979a, 1979b, 1980).

In the early 1980's, Gardner's book *Frames of Mind* (1983) was released, positing seven distinct intelligences (linguistic, logical-mathematical, spatial, inter-personal and intra-personal, musical, and bodily-kinesthetic), and lending force to the challenge against the idea of a single, generalized power of mind accounting for all human capabilities. Gardner reviewed existent studies on prodigies, gifted individuals, brain-damaged patients, idiots savants, normal children, normal adults, and considered the range of developed expertise across cultures. He posed that these developmental end-states provided clues to the nature of the structural constraints of the human brain from which they had evolved. His conclusions formed the basis of his theory of multiple intelligences.

During the latter 1970's and early 1980's as well, Robert Sternberg emerged as a major player in the movement to go *Beyond IQ* (Sternberg, 1985) with his triarchic theory of human intelligence. Drawing upon an information-processing model, he has since expanded his argument for different kinds of intelligence—speaking of "practical," "creative," and "analytic" intelligence (Sternberg, 1988) and even taking a stab at describing just what it is that we call "wisdom" (Sternberg, 1990).

Promising Trends Emerging From the Talent Development Movement

There have been several notably promising aspects of the move away from IQ as the assumed sole determinant of achievement potential. Enquiries into the extent to which manifested intellectual abilities are learnable (Perkins, 1995; Sternberg, 1986) rather than innate have caused us to scrutinize more carefully our assumptions about biologically-based potential. The current enthusiastic reception of Vygotskian sociocultural theory in education and psychology has focused our attention on the extent to which cognitive abilities are either constrained or facilitated by cultural shaping (Moll, 1990; Rogoff, 1990; Wertsch, 1985).

In addition, there has been an acknowledgment of and more open exploration into IQ-independent abilities (Feldman, 1979a; 1979b; 1980; Hermelin & O'Connor, 1986; 1990). Particularly intriguing have been studies of the talent profiles of child prodigies (Feldman, 1980: Morelock, 1995)—which have led to comparative studies of savant and prodigy capabilities, speculation as to how they are alike and different and discussion of what that implies for the relationship between IQ-independent and IQ-related abilities (Miller, 1989; Morelock & Feldman, 1993, Morelock, 1995). Also important has been the growing recognition of the vital role in talent development played by supportive influences—from the family (Bloom, 1985; Csikszentmihalyi, Rathunde & Whalen, 1993; Feldman, 1991a; Feldman & Piirto, 1995; Morelock, 1995) as well as from the culture (Feldman, 1991a; 1993; Gardner, 1993; Morelock & Feldman, 1991; Wallace & Gruber, 1989; Wozniak & Fischer, 1993).

The Paradigm Shift

The recent proliferation of concepts of multiple forms of intellectual talent from the work discussed above as well as from that of other researchers and scholars has had a tremendous impact on educational thought. It has spawned a number of talent development models for identification and programming (e.g., Feldhusen, 1992; Renzulli, 1993; 1994). Early in this decade, the changes wrought in the field of gifted education were described by Treffinger (1991), Feldman (1991b) and Treffinger and Sortore (1992) as a "paradigm shift" in which the fundamental concept of "giftedness" was changing. Feldman, for example, saw the paradigm as shifting from a traditional elitist one of giftedness as a stable, unchangeable trait consisting of high IQ and identifiable by a psychometric test to one of giftedness in multiple forms, developmentally based and defined and identified by excellence in performance.

The paradigm shift notion seemed to capture and provide form and words for some intuitive amorphous recognition shared by many. Once articulated, it found widespread resonance in the field. Indeed, in the spirit of the changes which many see as taking place, a statement issued by the U.S. Department of Education (1993) declared that "the term 'gifted' connotes a mature power rather than a developing ability and, therefore, is antithetical to recent research findings about children" (p. 26). According to the proponents of this view, child potential in all its myriad forms should be designated "talent" and "talent development for all" should become the inspired vision and laudable goal for the field. In a recent article by Treffinger and Feldhusen (1996) heralding the talent development movement as the "successor to gifted education," the authors state "As educators, our task is not to identify and tell youth that they are (or are not) 'gifted.' It is, instead, to help them discover emerging talent strengths and help them develop their talents." The gifted achiever strand has thus become seriously engaged in talent development. Some fear, however, that an unforeseen side-effect of the move to democratize and diversify concepts of talent may be that the field of gifted education is in the process of moving towards total obsolescence or irrelevance (Borland, 1996).

Are the paradigm shift intuitions an accurate interpretation of what is happening in the field? One could argue that the "paradigm shift" concept cogently captures the evolution of thought and work in the gifted achiever strand. But, as will be argued below, it fails to take into account the gifted child strand.

The Gifted Child Strand: The Evolution of Ideas and Empirical Evidence

After Leta Hollingworth's death in 1939, most of the energies of the gifted child strand went into exploring optimal ways of educating high IQ (i.e., "gifted") children. Hollingworth's concepts of an "enriched" curriculum combined with less time spent on learning the basic skills became fundamental guidelines in crafting programs for the gifted. Although her educational ideas provided the accepted foundation for the field of gifted education, Hollingworth as an individual was all but forgotten (Kearney, 1990). Her unique insights into the social-emotional issues emerging from giftedness were echoed in later writings (for example, see Getzels & Dillon, 1973; Newland, 1976; O'Shae, 1960; Roedell, Jackson and Robinson, 1980; Terman & Oden, 1974), but in general were overshadowed by the gifted achiever strand's more vocal emphasis on the identification of future leaders and performers. The findings of Terman and others (Gallagher, 1958; 1975; Liddle, 1958; Terman, 1925)—showing the majority of children with moderately advanced intellectual skills to be socially adept, emotionally secure and generally successful in both school and life—perhaps resulted in still less attention being directed to the problems enumerated by Hollingworth.

A Hollingworth Revival

In 1989, 50 years after Hollingworth's death, a conference was held at the University of Nebraska where she had graduated at the age of 15. The event commemorated her contributions to the fields of psychology and education. At it, Kathi Kearney commented on Hollingworth's unique contribution to exceptionally gifted children and their families:

> *Leta Hollingworth's unfinished legacy, **Children Above 180 IQ**, remains the only major research work of its kind. . . **Children Above 180 IQ** has become a living legacy, for it is a volume that brings both comfort and understanding to the families of such children today. Upon reading it, they often remark, "**Finally** someone has described my child. Finally we are not alone in this experience." A research work that can touch families in this way, almost fifty years after its publication, is truly a legacy and a treasure. (Kearney, 1989)*

The conference was followed by a special memorial issue of The *Roeper Review* (Silverman, 1990) dedicated to Leta Stetter Hollingworth as well as a reissuance of Hollingworth's biography (Hollingworth, 1943/1990) which had been written by her husband, Harry L. Hollingworth and originally published in 1943.

"Education for Life"—Annemarie Roeper

One particular educator and philosopher is notable for keeping the spirit of the gifted child strand alive (Roeper, 1990; 1991). Survivors of the Nazi Holocaust, Annemarie and George Roeper arrived in New York in the Spring of 1939—the year of Leta Hollingworth's death. Two years later, they founded the Roeper City and Country School in Bloomfield Hills, Michigan. The original mission of the school was to create an environment which would allow children to grow up with a minimum of hostility so that they would not feel the need to mistreat others, as the German youth of Nazi Germany had been led to do. In 1956, the school became a school for gifted children. One of Annemarie Roeper's special contributions lay in her understanding of the inner experiences of gifted children and their developmental differences in the way they thought, felt, and learned (Roeper, 1995a). She perceived giftedness as a ***process*** rather than a ***product,*** and believed that too often, children were seen solely in terms of what they could potentially ***produce*** rather than in terms of who they were in the totality of their being. Thus, she believed that children should be ***educated for life*** rather than ***educated for success***.. . . .

> *The education for life model differs radically from the education for success model. The latter grows out of the belief that people are defined by their skills, that they are what they do and how well they do it. The former, by contrast, stems from the belief that people are defined by their unique selves. Emphasis is placed on the growth of the self and mastery of the environment (Roeper, 1995b, p. 111).*

The Roepers established The *Roeper Review* with the purpose of focusing holistically on the philosophical, psychological, moral, and academic issues relating to the lives and experiences of the gifted and talented.

The Columbus Group Vision

In February, 1991, (Morelock, 1991; in press) I reported a case study of a 4 1/2 year old girl who, over a period of 10 months experienced a dramatic cognitive leap in her capacity for abstract thought accompanied by a period of extraordinary emotional turmoil. The plight of "Jennie" (a pseudonym) became a catalyst for the crystallization of a concept of giftedness distilling the insights accumulated over the years by the gifted child strand. In July of 1991, The Columbus Group—a group of practitioners, parents, and theorists—gathered to construct a new phenomenological definition of giftedness which made its debut in the literature the following year (Morelock, 1992). The Columbus Group took issue with the widespread emphasis on performance and achievement in defining giftedness, arguing that the qualitatively different inner experience of the gifted child lies at the heart of the phenomenon. They underscored the need for a definition of giftedness that would take into account the "unusual mental processing that constitutes giftedness" (Tolan, 1994, p. 137), including a heightened ability for the construction of meaning in the context of experience (Morelock, 1993) and the resultant complex moral and emotional life of the gifted child (Silverman, 1994):

> *Giftedness is asynchronous development in which advanced cognitive abilities and heightened intensity combine to create inner experiences and awareness that are qualitatively different from the norm. This asynchrony increases with higher intellectual capacity. The uniqueness of the gifted renders them particularly vulnerable and requires modifications in parenting, teaching and counseling in order for them to develop optimally (The Columbus Group, 1991).*
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> *In crafting its definition, the Columbus Group incorporated influences ranging beyond the gifted child strand in America to the work and thought of Polish psychiatrist, Kazimierz Dabrowski (1964; 1972), French psychologist, Jean Charles Terrassier (1985), the theoretical and empirical contributions of Alfred Binet (1909)' and the Russian developmental theory of Lev S. Vygotsky (1986, 1978). While Miraca Gross's 1993 Australian study of 15 exceptionally gifted children was released too late to be a precursor of the Columbus Group definition, the temper of her study placed it firmly in the gifted child strand.*

Reminiscent of the response that the talent development movement's paradigm shift construction evoked in the United States, the Columbus Group definition rang true for many throughout the world. It became the central organizing theme for the Eleventh World Conference on Gifted and Talented Children held in Hong Kong in 1995 (Silverman, 1995).

Comparing the Columbus Group Movement with the Talent Development Movement

The Columbus Group Movement curiously shares some features with the Talent Development Movement. It, too, focuses on development as a central concern. But whereas the Talent Development Movement emphasizes the shaping of potential into mature performance through the interaction of domain-specific requirements with individual biologically-based predispositions, the Columbus Group Movement emphasizes the intra-individual interaction and melding of cognition and emotion in asynchronous development. The Talent Development paradigm shift asserts the death of IQ as the instrument for identifying the potential for significant achievement. The Columbus Group Movement also seeks to shift the focus from IQ as a measure of potential achievement, claiming that IQ remains what it was before Terman's leap in reasoning resulted in erroneous attributions. For the Columbus Group, IQ is simply a minimal index of asynchrony—the extent to which cognitive development (mental age) diverges from physical development (chronological age)—with all the cognitive, social and emotional ramifications implied by that. In addition, the Columbus Group seeks to shift the focus ***off of achievement entirely*** in talking about giftedness,

and to focus instead on "the different reality that marks giftedness" (Morelock, 1992, p. 11).

While perhaps some in the gifted child strand might be amenable to finding another term besides ***gifted*** for the phenomenon of this form of asynchronous development, the question remains as to ***what*** could be used? As Roeper (1995) points out, "precocious development" captures the ***quantitative*** aspects of gifted development (i.e., a child's going through developmental milestones at a more rapid rate), but it fails to capture the ***qualitative*** dimensions (i.e., the complexity, depth and intensity of the inner experience accompanying those rapid changes). Furthermore, the term ***gifted*** connects contemporary research and thought pertaining to this subgroup of children to a literature stretching back to Terman's original selected group (Silverman & Kearney, 1992). Therefore, most in the Columbus Group Movement—as well as many who don't overtly declare themselves members of the Movement (e.g., see Gottfried, Gottfried, Bathurst, & Guerin, 1994)—hold that in order to minimize confusion and facilitate the connection of current research with what has come before, it makes sense to retain the term ***gifted*** to refer to this particular form of asynchronous development.

Research Evidence Supporting the Columbus Group Definition

Much of the empirical research supporting the Columbus Group Definition has come in the form of qualitative case studies—Hollingworth's case studies of children above 180 IQ (Hollingworth, 1942), Roeper's sensitive portrayals of gifted children (1995); Gross's (1993) studies of exceptionally gifted children, the previously-cited case study of "Jennie" (Morelock, 1991, in press) and studies of profoundly gifted children (IQs 200+) and their families (Morelock, 1995). Additional support has come from clinical findings (Lovecky, 1994; Silverman, 1993; Terrassier, 1985).

More recently, research findings have begun to mount demonstrating the ways in which gifted children differ developmentally from early infancy. For example, research into infant cognition has shown that later intellectual functioning in terms of enhanced IQ can be predicted on the basis of evidenced heightened generalized speed of information processing and retentiveness of memory in infancy (Colombo, 1993).

"Gifted infants" (or infants who have later been identified as high IQ children) have been reported in the literature as appearing more interactive with the environment, inner-directed and expressive (Lewis & Michalson, 1985). They are frequently reported as needing less sleep than average infants and being more demanding of cognitive stimulation (Morelock, in press; Silverman & Kearney, 1989).

A recently-published longitudinal study—the first prospective study of the development of intellectual giftedness (Gottfried, Gottfried, Bathurst & Guerin, 1994) documented that an early demand for heightened cognitive stimulation is a widespread phenomenon among gifted children. The researchers followed a randomly selected group of 107 children from middle-class families for their first eight years of life, taking numerous measures of various developmental milestones. At the age of 8, all of the children were administered an IQ test and some of the children scored in the "gifted" range while others did not. The researchers then went back into their files to study the antecedents of giftedness.

Gifted children were found to be different from the first year of life, demanding more stimulation from their environment and receiving it. The findings were supportive of Freeman's (1979) suggestion that gifted children received more stimulation because they process information more effectively and therefore assimilate more quickly. Parents appeared to recognize their gifted child's potential early in infancy and to respond to that recognition by providing more stimulating environments. In addition, from infancy, gifted children demonstrated more engagement and persistence in cognitively-demanding tasks when presented with them in testing situations.

Results from the study also indicated that gifted IQ implies generalized high intelligence. The gifted children were superior across an array of cognitive tasks beginning as early as the preschool period. Globality rather than specificity in cognitive performance characterized intellectual giftedness.

Gifted and nongifted children did not differ substantially in their ***patterns*** of cognitive or intellectual abilities (i.e., individual uneven profiles of strengths and weaknesses). The differences resided in the rate of development (in infancy) and in the level of performance thereafter. The gifted children progressed at a higher intellectual level and were advanced in their cognitive development or reasoning.

Recent case studies of two profoundly gifted children (Morelock, 1995; in press) raised the question of enhanced right brain functioning as a possible explanation for a phenomenon of "spontaneous knowing" apparent in both children. Convergent evidence from neuropsychological studies with precocious and average ability male and female adolescents (O'Boyle, Benbow, & Alexander, 1995) also suggest that enhanced right brain hemisphere involvement during basic information processing as well as superior coordination and allocation of cortical resources within and between the hemispheres are unique characteristics of the gifted brain.

Another line of research promising in terms of revealing structural and functional differences in the gifted brain stems from neuropsychological studies showing that the degree to which an individual has mastered different aspects of language is strongly predictive of aspects of cerebral organization that the individual displays (Mills, Coffey-Corina & Neville, 1994). Since the days of Hollingworth and Terman, one feature consistently connected with gifted development has been the early onset of receptive language in gifted children (Hollingworth, 1942; Gottfried, Gottfried, Bathurst & Guerin, 1994). This is frequently manifested through early expressive language as well (Hollingworth, 1942; Gottfried, Gottfried, Bathurst & Guerin, 1994). In the case studies of profoundly gifted children mentioned above (Morelock, 1995), I hypothesize that this early onset of language in gifted development is revelatory of underlying ***precocious*** developmental changes in brain organization and integration. Consequently, it follows that there are important differences in information processing characteristics of the young gifted brain.

Giftedness and Talent: A Suggested Rapprochement

Both the Talent Development Movement ***and*** the Columbus Group Movement have found widespread resonance and support because both represent the culminating manifestation of research evidence accumulated through their individual strands. One criticism being leveled at the concept of "gifted-

ness" in children is that it is a social construct (Sapon-Shevin, 1994; 1996). Gallagher (1996), in response to this criticism points out . . . .

> *We should admit that "gifted" is a constructed concept Sapon-Shevin points this out as though it was the ultimate proof of its nonusefulness. But "opera singer" is a constructed concept, "short-stop" is a constructed concept, "boss" is a constructed concept; every concept that we use to describe human beings is a constructed concept. Is giftedness an educationally useful construct? That is the important question (Gallagher, 1996, p. 235).*

The above data, accumulated from various research sources, clearly suggest that the "social construct" of giftedness is a valid one in terms of representing a specific form of developmental difference. To carry the thought beyond the immediate question, what is actually revealed by a careful review of ***all*** the accumulated evidence presented in this article is that ***both*** giftedness and talent are social constructs referring to distinctly different phenomena and ***both*** are educationally and psychologically useful—which brings us to the next point. What implications does all of the foregoing discussion hold for practice and research in the field? This overall query will be broken down into sub-questions in the following section and I will offer some possible resolutions to the issues involved.

Questions Pertaining to Implications for Practice and Research

What constructs do we need in order to understand the phenomena we are observing?

Both "giftedness" and "talent" are needed concepts. "Giftedness" is needed to identify the particular form of asynchronous development referenced in the Columbus Group definition, observed in childhood across cultures (Silverman, 1995), and specifically studied since Terman's IQ test provided an imperfect way of finding these children. It has pervasive implications for all of the gifted individual's experience and development—cognitive, social, emotional and even physical (Morelock, 1995). "Talent" is needed to refer to multi-leveled potential for domain-specific creative-productivity in the world which can be fostered through appropriate identification and environmental support. As educators and developers of talent, we are charged with the responsibility of helping children to realize whatever potential they have and to help them find a niche in the world where their potential is put to good use. Consequently, we need to assume that ***some*** level of talent is present in ***all*** children, and it is our responsibility to discover and foster it ***in all children*** (Feldman, 1979b; 1980; Treffinger & Feldhusen, 1996).

Why do we need to identify a subclassification of children called gifted?

The research suggests that gifted children are special needs children because they learn differently, function differently neuropsychologically and require a different level and type of cognitive stimulation. They are also potentially socially and emotionally at risk. The developmental differences increase as the level of asynchrony increases. Some critics of this stance have implied that "the gifted child" is an abstraction which has been reified (Margolin, 1994; 1996; Sapon-Shevin, 1994; 1996). However, a review of the empirical evidence accumulating through the gifted child strand suggests that in truth, real children with real developmental differences and differentiated special needs are in danger of being reduced to mere "abstractions" and sacrificed in the interest of contemporary social and political agendas.

What is the proper place for the ideas espoused by the Talent Development Movement?

As is recommended by a number of its proponents (e.g., Feldhusen, 1992; Renzulli, 1994; Treffinger & Feldhusen, 1996), talent development needs to become a foundational concept in general education, with the identification of talent potential and the active fostering of its development a central goal for all children. Concepts and strategies which have emerged from the field of gifted education, developmental psychology—or from any other field—that can help in this regard should certainly be used for all children—or at least for all of those children who benefit from them.

What is the proper place for the ideas espoused by the Columbus Group Movement?

The educational and psychological findings of the gifted child strand collected over the years and distilled into the Columbus Group vision of giftedness provide a rich understanding of the inner experience of the gifted child. The insights gleaned suggest what kinds of emotional, social and educational supports are needed to help these children understand themselves, develop emotionally fulfilling relationships with others, feel comfortable in an imperfect world when they see the imperfections so clearly, and maintain their natural enthusiasm for learning. As parents, educators, and counselors, we ***need*** this information in order to provide for these children. The collected insights need to infuse the education of these children if they are to grow to be healthy, happy adults.

In addition, if we are serious about talent development for ***all*** children, it follows that some differences in implementation will be required for any subclass of children who have special psychological and educational needs. This includes the special needs group of children called "gifted." Our pride in our egalitarian culture needs always to be tempered by an empathetic respect for and understanding of individual differences and special needs arising from them. Both research and theory emphasize that these children are sparked through interaction with mental peers and need to be with mental peers in order to develop true peer relationships—both for cognitive development (Rogers & Span, 1993; Tudge, 1990) and for deeply satisfying social (O'Shea, 1960) and emotional (Silverman, 1993) connections.

In addition, if these children are encouraged to continue their normal rates of learning, they can be expected to show accelerated progress in general learning and even more acceleration in areas of special talent. As children, they need to be allowed to develop cognitively, socially, and emotionally at their own rate(s)—unimpeded by administrative or social policy agendas. In consideration of all of these factors, ***gifted education /counseling*** must be continued as a special needs provision targeting these children. New knowledge from the talent development movement about the development of domain-specific expertise and how to facilitate it will enrich the development of talent for ***all children,*** but the processes of talent development, social integration, and affective education will always have to be tailored to the needs of ***gifted*** children in special ways.

What directions of research are needed in terms of talent development?

We need additional research into the optimal means of identifying and facilitating ***all kinds of talent.*** More research into the nature of expertise in various fields and the characteristic developmental progression from novice

to expert within various domains is important. We need to explore further the nature of both IQ-related competencies and IQ-independent abilities, find out how these combine to create varying manifestations and levels of domain-specific talent, and determine how required facilitative support differs across these varying manifestations.

What directions of research are needed in terms of gifted development?

We need to identify more precisely what undergirds the manifestation of asynchronous development in neuropsychological terms. We need to know how best to support the emotional development of vulnerable gifted children and how to help these children in the formidable task of finding a niche in the world. We must continue efforts in developing optimal educational methods and theories addressing their needs. We also need to know how to help adults and ***all*** children accept intellectual diversity just as we encourage attitudes of acceptance and celebration of diversities in culture, race and talent. ***Gifted children*** are "differently abled" just as other special needs children are "differently abled". ***All children*** deserve to be respected and understood for who they are.

In Conclusion: A Suggested Theoretical Framework Which Can Accommodate the Multidimensionality of Giftedness and Talent

In reviewing the findings emerging out of both the gifted achiever strand and the gifted child strand, the name of one theorist appears in both—the Russian developmentalist Lev. S. Vygotsky. Vygotsky's brilliance enabled him to see development in its full complexity. Consequently, he wrote about the shaping of cognition that comes about as a child learns to use socioculturally-evolved symbols (e.g. language) to construct and express meaning. He was particularly interested in how children, through the instruction of more competent others, come to master the physical and psychological "tools" and "signs" of their culture. He also wrote about the resultant changes in inner experience as this development occurred and the subsequent impact that those changes in inner awareness then had on continued development.

The concept of "talent development," rooted as it is in the interaction between the individual and socially constructed domains of knowledge, relates mainly to what Vygotsky called the ***interpsychological*** level of development (Vygotsky, 1981). By this, Vygotsky was referring to the transmittal of mastery via instruction from a more competent mentor to an individual seeking induction into the use of cultural tools and signs. Talent development takes place at the juncture between a domain of knowledge and an individual striving for mastery of domain-specific constructs and tools. It is mediated through social facilitation.

In contradistinction, I posit that "gifted development" relates to an atypical form of developmental process occurring at the ***intrapsychological*** (Vygotsky, 1981) level. It results in part from the precocious onset and rapid development of the mastery of culturally-evolved symbols (Morelock, in press). Gifted children, because of differences in underlying neuropsychological function/structure, differ from more typical children in the level and nature of cognitive stimulation which they elicit from their environment (Gottfried et al., 1994). Because of their consequently advanced cognitive development, they characteristically master and interiorize culturally constructed abstract representations of thought early in their developmental trajectory.

Vygotsky saw emotional and cognitive development as interrelated, with children's ability to respond emotionally to abstractions intimately linked with the gradual course of cognitive development spanning the childhood years. This is a developmental progression that takes place precociously and at an accelerated rate in gifted children (Morelock, in press) with important implications for the quality of inner experience. Following Vygotsky's line of thought, both the cognitive and emotional experiences of gifted children would be qualitatively different from that of their agemates whose minds have not yet been reshaped by the integration of cultural symbols into the flow of thought. Such a qualitative difference—and the emotional vulnerability associated with it (Morelock, in press)—has indeed been documented by accumulated research from the gifted child strand. The Vygotskian perspective thus supports Annemarie Roeper's (1995a) contention and the Columbus Group's assertion that the ***developmental differences comprising gifted development are both quantitative and qualitative.***

It is beyond the scope of this article to discuss fully the implications of using Vygotskian theory as a means of integrating and bringing new understanding to all that we have learned from both the gifted achiever strand and the gifted child strand (See Morelock, in press). It is perhaps enough at this point to be able to take heart in the realization that we need not continue to be at odds with one another. Curiously, all that has been learned over the history of our field can be integrated into a greater, more holistic understanding provided by the theory of a genius who died more than sixty years ago.

It is appropriate that this article end with a line from a poem by Tyutchev that Lev Vygotsky loved to recite. Blanck (1990) notes that it could serve as a metaphor for Vygotsky himself because of the continuing value and impact of his work far beyond the man's death. I suggest that it can also provide us with the hope of salvaging all that is solid and helpful from our past collective experience with the domain of knowledge that we have constructed together. Rather than being haunted by the spectres of obsolescence and irrelevance, we have the option of moving on together to create a stronger, clearer, and more comprehensive knowledge of the nature of giftedness, talent, and development.

"Not everything that was must pass."
(Tyutchev, as cited in Blanck, 1990, p. 31)

To be continued. . . . . .

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