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Gifted Behaviors Versus Gifted Individuals

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The question "What makes giftedness?" has been debated for decades, with renewed interest over the past 20 years as new theories of intelligence emerged, questions of equity were raised, and resources in schools declined. To shed light on this complex and controversial question, we will draw heavily on the theoretical and research literature associated with the study of gifted and talented persons, but our approach also reflects the point of view of educational practitioners who have devoted significant time and effort to translating research and theory into defensible identification and programming practices. In this chapter, an explanation of key features to be included in a definition of giftedness is followed by a review of the types of giftedness typically identified by school personnel and a summary of purposes for educating gifted students. Subsequent discussion of the developmental nature of giftedness and a rationale for viewing giftedness as a displayed behavior rather than a possessed trait lead to an explicit definition—the Three-Ring Conception of Giftedness (Renzulli, 1978).

Conceptions of Giftedness

Purposes and Criteria for a Definition of Giftedness

A primary purpose of theory construction in education or psychology, which includes defining important concepts, is to add to our understanding about human condition. But in applied fields of knowledge there is also a practical purpose for defining concepts. Hence, defining giftedness effectively relies on combining theoretical and practical perspectives. Further, a definition of giftedness is a formal and explicit statement that might eventually become part of official policies or guidelines and should be used to direct identification and programming practices. Therefore, creators of definitions need to recognize the consequential nature and pivotal role that definitions play in structuring the entire field, consider ramifications of their definitions, and recognize the practical and political uses to which their work might be applied.

As long as there are differences of opinion among reasonable scholars there will never be a single definition of giftedness, and this is probably the way that it should be. However, definitions are open to both scholarly and practical scrutiny, and for these reasons it is important that a definition meet the following criteria. The definition must:

1. be based on the best available research about the characteristics of gifted individuals rather than romanticized notions or unsupported opinions;
2. provide guidance in the selection and/or development of instruments and procedures that can be used to design defensible identification systems;

3. give direction to and be logically related to programming practices such as the selection of materials and instructional methods, the selection and training of teachers, and the determination of procedures whereby programs can be evaluated;
4. be capable of generating research studies that will verify or fail to verify the validity of the definition.

Two Kinds of Giftedness

Most efforts to define giftedness stem from studies focused mainly on the concept of intelligence. Although a detailed review of these studies is beyond the scope of this chapter, a few general conclusions from earlier research are necessary to set the stage for an analysis of the concept of giftedness. First, there are many kinds of intelligence and therefore single definitions cannot be used to explain this complex construct. Criticisms of unitary theories of intelligence led Sternberg (1984), Gardner (1983) and others to develop new models for describing and explaining human capabilities. For instance, Sternberg's "triarchic" theory of human intelligence consists of three sub-theories, but having studied the three aspects of intelligence for some years, Sternberg (1996, 2001) concluded that the answer to the question of intelligence is even more than just the *amount* of a person's analytical, creative, and practical abilities.[1] A person may be gifted with respect to any one of these abilities or with respect to the way she or he *balances the abilities* to succeed (Sternberg & Grigorenko, 2002). Further, intelligence, according to Sternberg and his colleagues, is not a fixed entity, but a flexible and dynamic one (i.e., it is a form of developing expertise) (Sternberg & Grigorenko, 2002; Sternberg & Lubart, 1995; Sternberg & O'Hara, 1999). Sternberg concluded, "The notion of someone's being 'gifted' or not is a relic of an antiquated, test-based way of thinking" (1996, p. 197). Gardner (1983) posed what has come to be called "multiple intelligences," initially reflecting seven domain-specific intelligences to which an eighth one (naturalistic intelligence) was later added (Gardner, 1999).[2]

In view of this recent work and numerous earlier cautions about the dangers of describing intelligence with a single score, we conclude that this practice has been and always will be questionable. At the very least, attributes of intelligent behavior must be considered within the context of cultural and situational factors. Multiple forms of intelligence as described by Sternberg and Gardner, theories of developmental progression, and biological approaches have much to contribute to a better understanding of intelligence. "We should be open to the possibility that our understanding of intelligence in the future will be rather different from what it is today." (Neisser et al., 1996, p. 80).

Second, there is no ideal way to measure intelligence and therefore we must avoid the typical practice of believing that if we know a person's IQ score, we also know his or her

[1] According to Sternberg, analytic abilities are those measured by typical IQ tests and include reasoning, critical thinking, etc.; creative abilities allow for the synthesis or generation of unique and useful solutions to novel problems; and practical abilities allow one to grasp and deal with everyday tasks in ways that maximize the outcomes of analytic or synthetic abilities.

[2] The first two intelligences—linguistic and logical-mathematical—are typically valued in schools; musical, bodily-kinesthetic, and spatial are usually associated with the arts; and another two—interpersonal and intra-personal—are called "personal intelligences" by Gardner. Gardner later concluded (1999) that naturalist intelligence also qualifies as intelligence in his Multiple Intelligences (MI) theory.

intelligence. Even Terman warned against total reliance on tests: "We must guard against defining intelligence solely in terms of ability to pass the tests of a given intelligence scale." (1921, p. 131). Thorndike echoed Terman's concern by stating" [T]o assume that we have measured some general power which resides in [the person being tested] and determines his ability in every variety of intellectual task in its entirety is to fly directly in the face of all that is known about the organization of intellect." (Thorndike, 1921, p. 126).

Further, we should not conclude that test scores are the only factors that contribute to success in school. While IQ scores correlate moderately with school grades, they account for only 16–36 percent of the variance in later performance. Indeed, according to Jones (1982), a majority of college graduates in every scientific field of study had IQs between 110 and 120. Using a strict cut-off score on intelligence tests to exclude students from special services would be analogous to *forbidding* a youngster from trying out for a basketball team because he or she missed the "cut-off height" by a few inches! Basketball coaches know that such an arbitrary practice would result in missing the talents of youngsters who may overcome slight limitations in inches with other abilities such as drive, speed, teamwork, ball-handling skills, and perhaps even the ability and motivation to out-jump taller persons trying out for the team.

Concerns about the difficulty of defining and measuring intelligence are cited to highlight the larger problem of isolating a unitary definition of giftedness. At the very least, we will always have several conceptions (and therefore definitions) of giftedness which can first be examined by distinguishing between two broad categories found in the research literature. The first category is referred to as "high-achieving giftedness" and the second as "creative-productive giftedness." Note that:

1. both types of giftedness are important;
2. there is usually an interaction between the two types of giftedness;
3. special programs should make appropriate provisions for nurturing both types of giftedness as well as offering numerous occasions when the two types interact with each other.

High-Achieving Giftedness

High-achieving giftedness might also be called test-taking or lesson-learning gifted-ness. Most easily measured by IQ or other cognitive ability tests and/or achievement measures, high-achieving giftedness conceptions most often form the basis for selecting students for special programs. Students who score high on IQ tests are also likely to get high grades in school; however, the predictive nature of these scores is unclear. Dai (2010) cautions that a positive correlation between IQ and achievement "[C]an be seen as indicative of redundancy or overlap of the two types of tests rather than a causal relationship" (p. 26). Test-taking and lesson-learning abilities generally remain stable over time, leading to several conclusions about high-achieving giftedness:

1. it exists in varying degrees;
2. it can be identified through standardized assessment techniques; and
3. we should make appropriate modifications for students who have the ability to learn regular curricular content at advanced rates and levels of understanding.

Curriculum compacting (Renzulli, Smith, & Reis, 1982), a procedure used for modifying curricular content to accommodate advanced learners, and other acceleration techniques should be an essential part of school programs that strive to respect individual differences that are clearly evident from scores on cognitive ability and achievement tests.

Creative-Productive Giftedness

Creative-productive giftedness describes human activity and involvement where a premium is placed on the development of original ideas and products purposefully designed to have an impact on one or more target audiences. Learning situations designed to promote creative-productive giftedness emphasize the use and application of information (content) and thinking processes in an integrated, inductive, and real-problem-oriented manner. The role of the student is transformed from that of a learner of prescribed lessons to one in which the learner uses the modus operandi of a first-hand inquirer. In other words, creative-productive giftedness is putting one's abilities to work on problems and areas of study that have personal relevance, and which can be escalated to appropriately challenging levels of investigative activity. The roles of students and teachers in the pursuit of these problems have been described elsewhere (Renzulli, 1982, 1983).

Why is creative-productive giftedness important enough to raise questions about the "tidy," and relatively easy, test-score approach traditionally used to select students? The answer to this question is simple and yet very compelling. Research tells us that there is much more to the making of a gifted person than the abilities revealed on traditional tests of intelligence, aptitude, and achievement. Many who are moderately below the traditional 3–5 percent test-score cut-off levels for inclusion in gifted programs have shown that they can do advanced-level work (Reis & Renzulli, 1982). Furthermore, history tells us that it has been the creative and productive people of the world, the producers rather than consumers of knowledge, the reconstructionists of thought in all areas of human endeavor, who have become recognized as "truly gifted" individuals. History does not remember persons who merely scored well on IQ tests or those who learned their lessons well.

Purposes of Education for the Gifted

Implicit in any effort to define and identify gifted youth is the assumption that schools will provide various types of specialized learning experiences that are responsive to and show promise of developing the characteristics implicit in the definition. In other words, the *why* question supersedes the *who* and *how* questions. There are two generally accepted purposes for providing special education for the gifted. These services:

1. provide young people with maximum opportunities for self-fulfillment through the development and expression of one or a combination of performance area(s) where superior potential may be present;
2. increase society's supply of persons who will help to solve the problems of contemporary civilization by becoming producers of knowledge and art rather than mere consumers of existing information.

Arguments are offered for and against both of these purposes, but most people agree that goals related to self-fulfillment and/or societal contributions are generally consistent with democratic philosophies of education. These two goals are highly interactive and mutually supportive of each other. In other words, the self-satisfying work of scientists, artists, and leaders in all walks of life usually produces potentially valuable contributions to society. Keeping in mind the interaction of these two goals, and the priority status of the self-fulfillment goal, it is safe to conclude that supplementary investments of public funds and systematic effort for highly able youth would produce at least some results geared toward the public good. If, as Gowan (1978) has pointed out, the purpose of gifted programs is to increase the size of society's reservoir of potentially creative and productive adults, then the argument for gifted education programs that focus on creative productivity is compelling.

The Gifted and the Potentially Gifted

A subtle, but very important, distinction exists between the "gifted" and the "potentially gifted." Most of the research about conceptions of giftedness is based on students and adults who have been judged (by one or more criteria) to be gifted. The general approach to the study of gifted persons could easily lead the casual reader to believe that giftedness is magically bestowed on a person in much the same way as nature endows us with blue eyes, red hair, or a dark complexion. As a matter of fact, there is considerable debate regarding the origins of giftedness. While there are proponents of the notion of giftedness as fundamentally endowed by nature, others contend that giftedness is developed and enhanced by specific support in the environment. Another perspective posits that nature and nurture interact to form a person's profile. Recently, Dweck's work (1999, 2006) suggests that a construct such as giftedness *can be developed* in some people if an appropriate interaction takes place between a person, his or her environment, and a particular area of human endeavor. According to Good and Dweck (2005), individuals who view their ability as "fixed" (p. 40) are defensive about admitting to or exposing their deficiencies. Those who see their ability as "malleable" (p. 40) or changeable are better prepared to address new challenges. A growth mindset allows people to extend their levels of achievement (Dweck, 2006).

When other traits are described as components of giftedness (for example, creativity), there is no assumption that one is "born with" these traits, even if one happens to possess a high IQ. Almost all human abilities can be developed; hence, attention to the potentially gifted (those who could "make it" under the right conditions) as well as to those who have been studied because they gained some type of recognition is equally important. Implicit in this concept of the potentially gifted, then, is the idea that giftedness emerges or "appears" at different times and under different circumstances. Without such an approach, there would be no hope whatsoever of identifying bright underachievers, students from disadvantaged backgrounds, or any special population not easily identified through traditional testing procedures.

Are People "Gifted" or Do They Display Gifted Behaviors?

Except for certain functional purposes related mainly to professional focal points (i.e., research, training, legislation) and to ease of expression, terms such as *"the gifted"* are counterproductive to educational efforts to identify and provide services for certain students in the general school population. Rather, we propose a shift in emphasis from the concept of "being gifted" (or not

being gifted) to a concern about developing gifted behaviors in students who have the highest potential for benefiting from special education services. This slight shift in terminology might appear to be an exercise in heuristic hair-splitting, but it has significant implications for the concept of giftedness and the ways in which the field engages in research endeavors and effective educational programming.

The implications of this shift can be placed in perspective by raising a series of questions.

1. Is giftedness an absolute or a relative concept? That is, is a person either gifted or not gifted (the absolute view); or can varying kinds and degrees of gifted behaviors be displayed in certain people, at certain times, and under certain circumstances (the relative view)? Is gifted a static concept (i.e., you have it or you do not have it) or is it a dynamic concept (i.e., it varies both within persons and within learning-performance situations)?
2. Are giftedness and high IQ one and the same? And if so, how high does a person's IQ need to be before he or she can be considered gifted? If giftedness and high IQ are not the same, what other characteristics contribute to the expression of giftedness? Is there any justification for providing selective services for certain students who may fall below a predetermined IQ cut-off score?
3. What causes only a minuscule number of Thomas Edisons or Langston Hugheses or Isadora Duncans to emerge, while millions of others with equal "equipment" and educational advantages (or disadvantages) never rise above mediocrity? Why do some people who have not enjoyed the advantages of special educational opportunities achieve high levels of accomplishment, whereas others who have experienced the best of educational programming opportunities fade into obscurity?

Research provides the most powerful argument in response to these questions for policy makers who must render important decisions about the regulations and guidelines dictating identification practices in their states or local school districts. An examination of research suggests that gifted behaviors can be developed in those who are not necessarily the ones who earn the highest scores on standardized tests. Implications of this research for identification practices are clear.

The first research-based implication will undoubtedly be a major controversy in the field for many years, but needs to be dealt with to defuse criticism directed at the gifted field. Simply stated, policy makers must re-examine identification procedures that result in a final and limited pre-selection of certain students and the concomitant implication that these young people are, and always will be, the only "gifted." This absolute approach, coupled with the almost total reliance on test scores, is not only inconsistent with the research, but almost arrogant in the assumption that assessment during a single one-hour segment of a young person's life should determine if he or she is "gifted."

The alternative to an absolutist view is to forgo the "tidy" and comfortable tradition of "knowing" on the first day of school who is gifted and who is not gifted. Rather, effort must be redirected toward developing "gifted behaviors" in certain students (not all students), at certain times (not all the time), and under certain circumstances. The trade-off for tidiness and administrative expediency is a much more flexible approach to both identification and

programming, and a system that not only shows a greater respect for the research on gifted and talented people, but one that is fairer and more acceptable to educators and the general public.

Second, an effective identification system must take into consideration factors in addition to test scores. According to recent research, strict cut-off scores on IQ or achievement tests are still the primary, if not the only, criterion given *serious* consideration in final selection in spite of the multiple data points gathered in many screening procedures (Borland, 2004). When screening information reveals outstanding potential for gifted behaviors, it is almost always "thrown away" if predetermined cut-off scores are not met. Respect for other data means they must be given equal weight. That is, evaluators must come to believe in and rely on non-test criteria and shed the belief that test scores are inherently more valid and objective than other procedures. As Sternberg (1982) pointed out, *quantitative* does not necessarily mean *valid*. When it comes to identification, it is far better to have imprecise answers to the right questions than precise answers to the wrong questions. The broadened and malleable notions presented thus far led to the Three-Ring Conception of Giftedness (Renzulli, 1977) and the Revolving Door concept of gifted identification (Renzulli, Reis, & Smith, 1981).

The Three-Ring Conception of Giftedness

The Three-Ring Conception of Giftedness is a theory that attempts to portray the main dimensions of human potential for creative productivity. Research on creative-productive people has consistently shown that although no single criterion can be used to determine giftedness, persons who have achieved recognition because of their unique accomplishments and creative contributions possess a relatively well-defined set of three interlocking clusters of traits. These clusters consist of above-average, though not necessarily superior, ability, task commitment, and creativity (see Figure 1). It is important to point out that no single duster "makes giftedness." Rather, it is the interaction among the three clusters that research has shown to be the necessary ingredient for creative-productive accomplishment (Renzulli, 1978). This interaction is represented by the shaded portion of Figure 1.

Discussion of the Three Rings

Are There Additional Clusters of Abilities That Should Be Added to the Three-Ring Conception of Giftedness?

One of the most frequent reactions to this work has been the suggestion that the three clusters of traits portrayed in the model do not adequately account for the development of gifted behaviors. Extensive examination of the research on human abilities has resulted in a modification of the original model represented figurally by the houndstooth background in which the three rings are now imbedded (see Figure 1).

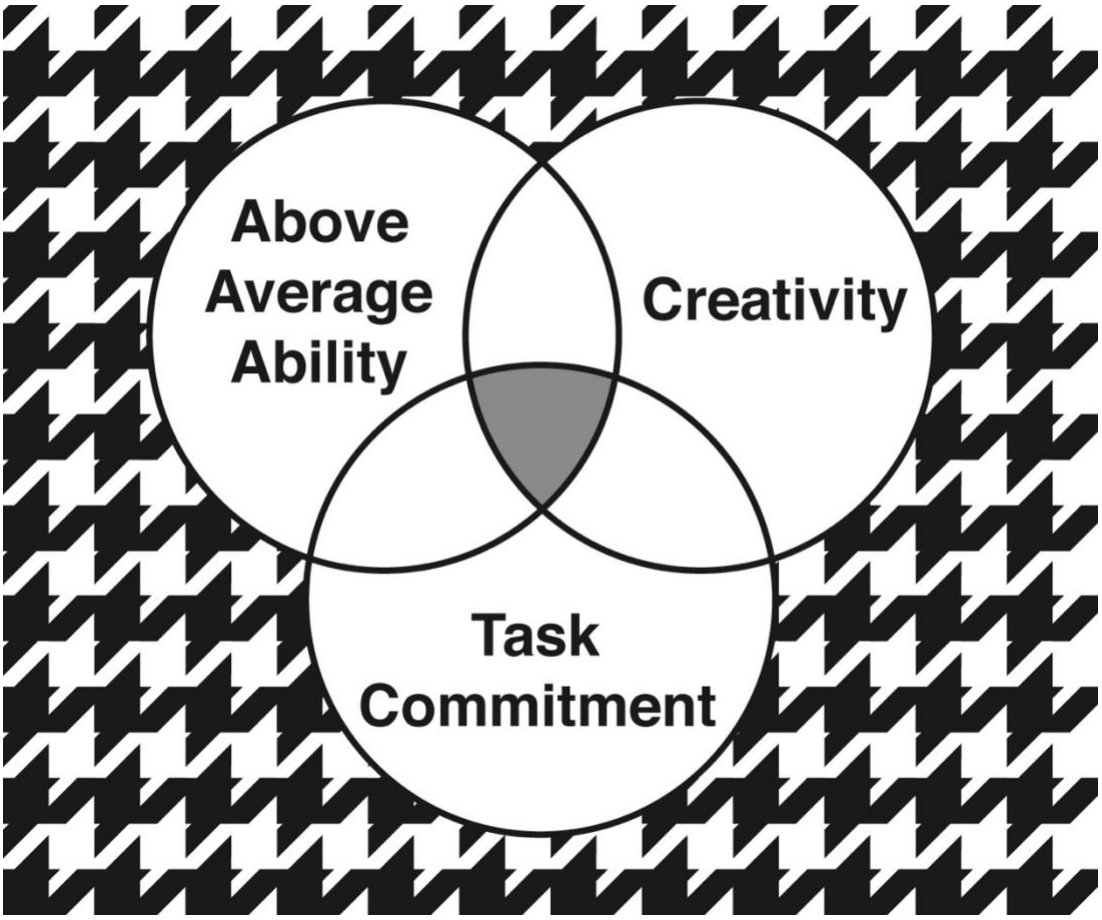

Figure 1. The Three-Ring Conception of Giftedness. The houndstooth background represents personality and environment. factors that give rise to the three clusters of traits.

The interaction among the original three rings is still the most important feature leading to the display of gifted behaviors. There are, however, a host of other factors that must be taken into account to explain why some persons display gifted behaviors at certain times and under certain circumstances. These factors are grouped into the two traditional dimensions underlying studies about human beings commonly referred to as personality and environment. As indicated by research on the manifestation of gifted behaviors, each of the factors listed in Table 1 plays a role, albeit to varying degrees. What is even more important is the interaction between the two categories and among the numerous factors listed in each column. (In fact, a houndstooth pattern was selected over an earlier checkerboard design in an effort to convey this interaction.) Considering the almost limitless number of combinations between and among the factors listed in Table 1, it is easy to realize why so much confusion has existed about the definition of giftedness.

Table 1. Personality and environmental factors influencing giftedness

Personality factors	Environmental factors
Perception of self	Socio-economic status
Courage	Parental personalities
Character	Education of parents
Intuition	Stimulation of childhood interests
Charm or charisma	Family position
Need for achievement	Formal education
Ego strength	Role-model availability
Energy	Physical illness and/or well-being
Sense of destiny	Chance factors (financial inheritance, death)
Personal attractiveness[a]	Zeitgeist (living near an art museum, divorce, etc.)

a Although personal attractiveness is undoubtedly a physical characteristic, the ways in which others react to one's physical being are quite obviously important determinants in the development of personality.

Each of the factors is obviously a complex entity which could be subdivided into numerous component parts. The factor of socio-economic status, for example, accounts for such things as prenatal care and nutrition, and educational opportunities. On the personality side of the ledger, MacKinnon (1965) found that the most highly effective individuals had life histories marked by severe frustrations, deprivations, and traumatic experiences. Findings such as these highlight the complexity of the problem. The advantages of high socio-economic status, a favorable educational background, and early life experiences that do not include hardship, frustration, or disappointment may lead to a productive career for some individuals; but for others, it may eliminate the kinds of frustration that might be the "trigger" to a more positive application of one's abilities. Each of the factors above shares one or a combination of two characteristics. First, most of the personality factors are long-term developmental traits or traits that in some cases are genetically determined. Although schools may play an important role in developing traits such as courage and the need for achievement, it is highly unrealistic to believe that schools shoulder the major responsibility for overall personality formation. Second, many factors such as socio-economic status, parental personalities, and family position are chance factors in children's lives, which educators must take as givens. We cannot tell a child to be the firstborn or to have parents who stress achievement! For these reasons, the model for identification of and programming for gifted students which has evolved from the Three-Ring Conception of Giftedness is concentrated on the three sets of clusters set forth in the original model. Of course, certain aspects of the original three clusters are also chance factors, but research suggests that creativity and task commitment are modifiable and can be influenced positively by purposeful kinds of educational experiences (Reis & Renzulli, 1982). And although the jury is still out on the issue of how much of one's ability is influenced by heredity and how much by environment, psychologists and educators generally conclude that abilities (both general and specific) can be influenced to varying degrees by the quality of learning experiences.

Are the Three Rings Constant?

Most educators and psychologists agree that the above-average-ability ring represents a generally stable or constant set of characteristics. In other words, if an individual shows high ability in an

area such as mathematics, it is almost undeniable that mathematical ability was present in the months and years preceding a "judgment day" (i.e., a day when identification procedures took place), and that mathematical ability will tend to remain high. In view of the types of assessment procedures most readily available and economically administered, it is easy to see why conceptions of giftedness based on ability assessments dominate decision making about placement in special programs. Educators feel more comfortable and confident with reliably and objectively measured traits, but the "comfort" engendered by the use of such tests often causes them to ignore or only give minimal attention to the other two clusters of traits.

In the Revolving Door Identification Model based on the Three-Ring Conception of Giftedness (Renzulli et al., 1981), above-average ability is the major criterion for identifying a group of students referred to as the Talent Pool, which generally consists of the top 15–20 percent of the general school population. Test scores, teacher ratings, and other forms of "status information" (i.e., information that can be gathered and analyzed at a fixed point in time) are of practical value in making certain kinds of first-level decisions about accessibility to some of the general services that should be provided by a special program. This procedure guarantees that students who earn the highest scores on cognitive ability tests have access to services that appropriately modify curriculum in areas where advanced levels of ability can be clearly documented. Indeed, advanced coverage of traditional material and accelerated courses should be the "regular curriculum" for high-ability students in areas of advanced ability.

However, task commitment and creativity are different! While "status information" regarding these constructs can be garnered from tools such as rating scales, divergent thinking tests, and personality inventories, these traits are not present or absent in the same stable fashion as mathematics ability in the example above, nor as other aptitudes might be. Equally important is recognition that they are not adequately assessed by the highly objective and quantifiable means characterizing test-score assessment of traditional cognitive abilities. A score on a test of creativity provides limited information about levels of creative capacity because the assessments examine predefined constructs such as figural divergent thinking, creative attitudes, or verbal insights, but do not indicate how an individual will use or expand upon that potential at certain times and under certain circumstances. Likewise, a measured level of achievement motivation cannot be used to predict students' indefatigable persistence in topics they have personally selected to pursue. In other words, we cannot put a percentile on the value of a creative idea, nor can we assign a standard score to the amount of effort and energy a student might be willing to devote to a highly demanding task. Creativity and task commitment "come and go" as a function of the types of situations in which certain individuals become involved; therefore, "action information" is an equally valuable, if not more relevant, assessment of an individual's readiness to pursue or engage in creative-productive activity.

Three principles guide understanding of the creativity and task commitment clusters. First, the clusters are variable rather than permanent. Although there may be a tendency for some individuals to "hatch" more creative ideas than others and to have greater reservoirs of energy that promote more frequent and intensive involvement in situations, a person is not either creative or not creative. Almost all studies of highly accomplished individuals indicate that their work is characterized by peaks and valleys of both creativity and task commitment. One simply cannot (and probably should not) operate at maximum levels of output in these two areas on a constant basis. Most productive persons have consistently reported "fallow" periods and even

experiences of "burnout" following long and sustained encounters with the manifestation of their talents. Even Thomas Edison, acknowledged to be the world's record holder of original patents, did not have a creative idea for a new invention every waking moment of his life. Second, task commitment and creativity can be developed through appropriate stimulation and training. Because of variations in interest and receptivity, some people are more influenced by certain situations than others. While we cannot predetermine which individuals will respond most favorably to a particular type of experience, through general interest assessment techniques and stimulus variation, we can raise the probability of generating a greater number of creative ideas and increased manifestations of task commitment in Talent Pool students. When the Three-Ring Conception of Giftedness is applied as an identification model, the ways in which students *react* to planned and unplanned stimulation experiences has been termed "action information." Action information is used to make decisions about which students might benefit from individualized and advanced kinds of learning activities. The important distinction between status information and action information is that action information cannot be gathered before students have been selected for special programming. Giftedness, or at least the beginnings of situations in which gifted behaviors might be displayed and developed, is in the *responses* of individuals rather than in the stimulus events. This second-level identification procedure is, therefore, a critical component of the general enrichment experiences provided for Talent Pool students and is based on the concept of situational testing that has been described in the theoretical literature on test and measurements (Freeman, 1962).

Finally, creativity and task commitment almost always stimulate each other. A person gets a creative idea; the idea is encouraged and reinforced by self and/or others. The person decides to "do something" with the idea, and thus, commitment to the task begins to emerge. Similarly, a strong commitment to solving a particular problem will frequently trigger the process of creative problem solving. In this case, the situation undoubtedly gives rise to the adage "necessity is the mother of invention." This final point is especially important for effective programming. Students participating in a gifted program should be aware of opportunities to act on creative ideas and commitments in areas of particular interest. Similarly, persons responsible for special programming should be knowledgeable about strategies for reinforcing, nurturing, and providing appropriate resources to students at those times when creativity and/or task commitment are displayed. Further examples of the relationship between the definitions of the three clusters of traits, identification procedures, and associated programming services can be found in the Schoolwide Enrichment Model (Renzulli, Gubbins, McMillen, Eckert, & Little, 2009).

Are the Rings of Equal Size?

Originally, the clusters were presented as "equal partners" in contributing to the display of gifted behaviors. Reflection has led to the position that creative-productive giftedness requires an interaction among all three clusters for high-level performance, but all three clusters need not be of equal size; nor are the sizes of the clusters constant throughout the pursuit of creative-productive endeavors. For example, task commitment may be minimal or even absent at the inception of a very large and robust creative idea, and the energy and enthusiasm for pursuing the idea may never be as large as the idea itself. Similarly, there are undoubtedly cases in which an extremely creative idea and considerable task commitment overcome somewhat lesser amounts of traditionally measured ability. Such a combination may even result in increased

ability by attainment of the technical proficiencies needed to see an idea through to fruition. Because numerical values cannot be assigned to the creativity and task commitment dusters, empirical verification of this interpretation of the three rings is impossible. But case studies based on the experience of creative-productive individuals and research on programs using this model (Reis, 1981) indicate that stronger clusters compensate for somewhat lesser strength in one or both of the other two areas. Most importantly, all three rings must be present and interacting to some degree in order for high levels of productivity to emerge.

Conclusion: What Makes Giftedness?

In recent years, renewed interest in the study of giftedness and related efforts to provide special educational services for this segment of our school population have occurred. A healthy aspect of this renewed interest has been the emergence of new and innovative theories to explain giftedness, and research studies with promise of greater insights and more defensible approaches to both identification and programming. Conflicting theoretical explanations abound, and various interpretations of research findings add an element of excitement and challenge that can only result in greater understanding of the concept in the years ahead. So long as the concept itself is viewed from the vantage points of different subcultures within the general population and differing societal values, there will always be a wholesome variety of answers to the question: What makes giftedness? These differences in interpretation are indeed a salient and positive characteristic of any field that attempts to further our understanding of the human condition.

The Three-Ring Conception of Giftedness reflects a belief that efforts to define this concept must be research-based and relevant to the persons most influenced by this type of work. While it represents our interpretation of the available evidence, educators must continue the search for greater understanding of this concept which is so crucial to the further advancement of civilization. The task of providing better services to our most promising young people, however, cannot wait until theorists and researchers produce an unassailable ultimate truth because such truths probably do not exist. But the need and opportunities to improve educational services for these young people exist in countless classrooms every day of the week.

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