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What Is Giftedness?

The Montgomery County, Maryland, public schools decided in December of 2008 to scrap the gifted label (De Vise, 2008; Stabley, 2008). According to school officials, erasing the label does not matter because gifted instruction is still available – to all students. Not all parents have been pleased with this decision: “If Montgomery school officials don’t ‘give these kids a name, they can ignore the real fact they exist,’ Lori White Wasserman, a parent, wrote on an e-mail list for advocates of gifted instruction in the county” (quoted in De Vise, 2008).

The school officials had reasons for their decision. How good the reasons were is a matter of debate.

First, Montgomery County is a district in which, according to De Vise (2008), most if not all parents think their children are above average. One is reminded of Garrison Keillor’s mythical Lake Wobegon, where all the children are above average (Garrison Keillor quotes, 2009). So some parents were apparently offended when their children were not identified as gifted.

Second, Montgomery County is among those school districts that are extremely competitive. Its schools are nationally, and perhaps internationally, famous and students work very hard to compete in a pressured atmosphere. Dropping the “gifted” label is one effort to decrease the competition and the marks of separation among the students in the district.

Third, Montgomery’s philosophy appears to be that all children should receive the quality of education traditionally reserved for the gifted. If all children receive basically the same instruction, then it is not clear what value there is to labeling children differentially. The labels then might be seen as serving no clear educational purpose, other than to label!

Do we need a label of “gifted”? What does “gifted” really mean? Why is a child who scores in the top 1% on the Wechsler Intelligence Scale for Children much more likely to be labeled as gifted than a child whose

Cambridge University Press

978-0-521-74009-8 - Explorations in Giftedness

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100-meter sprinting time places her in the top 1% of her age cohort? Why is a physicist who is considered #1 in the country by his or her peers or another panel of judges considered gifted, whereas the bank robber who is #1 on the FBI's most-wanted list is not?

In one culture, the gifted individual might be viewed as a hunter; in another culture, as a drummer; and in a third, as a student. The first two cultures might not even have any type of formal schooling, whereas the third one might not provide much opportunity for the development of hunting skills. So we need some basis for specifying how we identify gifted individuals.

THE PENTAGONAL THEORY FOR IDENTIFYING THE GIFTED

We have proposed that giftedness can be understood in terms of five criteria. We have referred to this as the “pentagonal” theory of giftedness (Sternberg, 1993; Sternberg & Zhang, 1995).

The Excellence Criterion

The excellence criterion states that the individual is *superior in some dimension or set of dimensions relative to peers*. To be gifted, one has to be extremely good at something – in psychological terminology, high in a judged dimension or dimensions. How high is “extremely high” may vary from one context to another, but the gifted person is always perceived to be abundant in something, whether it be creativity, wisdom, or another skill or construct. In the present view, excellence relative to peers is a necessary condition for an individual to be labeled as gifted, but not a sufficient one.

The qualification “relative to peers” is necessary because the designation of excellence depends upon the skills of those against whom one is judged. A 10-year-old's raw score on an intelligence test might convert into a very high score relative to age peers but would seem unexceptional relative to children 5 years older. Similarly, a musical performance that would be exceptional for an 8-year-old taking weekly music lessons at school might be quite undistinguished for an 8-year-old who has been trained at a specialized music school since age 4.

There are those who would like to dispense with the “gifted” label. Some of the educators in Montgomery County seem to be among them. To the extent their argument is that all children deserve an excellent education, we agree. But to the extent that the argument implies there are not individual differences in excellence of the students, we disagree. There are individual

Cambridge University Press

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differences in almost everything – height, weight, body build, musical skills, and athletic skills. What, exactly, do such individual differences imply?

First, the existence of individual differences says nothing about modifiability. Most individual differences are modifiable (Sternberg, 1997a). Gifted education does not imply that students are stuck at a particular level of performance. All students, including gifted ones, can improve in their levels of skills and knowledge.

Second, as students learn, patterns of individual differences change (Sternberg & Grigorenko, 2001a, 2002a). So if one does gifted identification, one has to realize that who is identified as gifted may change as a function of the kinds of tasks presented and the kinds of situations in which they are presented. The people who are the best hunters are not necessarily the best mathematicians, and vice versa. But no one has yet found a way to eliminate individual differences.

Third, there is intraindividual variability as well as interindividual variability. The people who look smart at one age or skill level might be different from those who look smarter at a different age or skill level. For example, the champion mathematician of the sixth-grade arithmetic class may flame out when he or she reaches trigonometry. Similarly, the ace in trigonometry may be much less adept in constructing complex mathematical proofs.

Finally, excellence will exist whether we have a word for it or not. We can get rid of the “gifted” label, but giftedness will continue to exist whether we label it or not. In anti-utopian novels, such as Orwell’s *1984* or Clarke’s *The City and the Stars*, politicians may try to homogenize the masses. But people will differ despite the efforts of politicians, educators, or anyone else. They will also have different educational needs. Changing how language is used will not change the differential needs with which students come to the classroom.

The Rarity Criterion

The rarity criterion states that to be labeled as gifted, an individual must possess a *high level of an attribute that is rare relative to peers*. The rarity criterion is needed to supplement the excellence criterion because a person may show an abundance of a given attribute, but if a high evaluation of that attribute is not judged to be rare, the person is not viewed as gifted. Suppose we give a test of mastery of the basics of the English language to a class of college seniors at a good university. They should all score very high on the test because all are proficient in the basics of English. But even if all received perfect scores, we would not say they are all therefore gifted. Thus, one may

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display excellence, but unless such excellence is rare, one is not likely to be viewed as gifted.

The senior author once heard a talk in which the speaker said that, were it not for bad schooling, everyone would have an IQ over 180. It is not clear what he meant, as IQs are assigned on the basis of statistical deviations from the average score, and if people's performances increased, the average IQ would still be 100. Indeed, Flynn (1987) found that people's performances, at least on IQ tests, increased through much of the 20th century. Test publishers just kept redefining what they meant by an IQ of 100, so that the level of performance needed to reach this score increased.

The point is that even if mean levels increase, there will still be people who perform at high (as well as low) levels that are relatively rare. Their educational needs will be different from the needs of those who perform at more typical levels in their cohort. Anyone who has ever sat through a class bored stiff because the material was much too easy (or frustrated because the material was much too hard) knows this fact. So the level of absolute performance that is labeled as "gifted" may change from one time to another; but the fact that some few people will do much better than others will not change.

Grade inflation is, in a way, a refusal to acknowledge that there will always be differences, whatever they mean. Grade inflation may genuinely reflect a difference in the quality of students over time – perhaps they are getting better. It probably also reflects an abrogation of the responsibility of teachers to recognize that, whatever the mean, individual differences will still exist. But if we were to give everyone A's or to assign everyone an IQ of 180 or above, we still would not dispense with the fact that gifted performance represents the top of one or more distributions, wherever those distributions may be at a given time or place.

The Productivity Criterion

The productivity criterion states that *the dimension(s) along which the individual is evaluated as superior must lead to, or potentially lead to, productivity*. Consider the contestants in a beauty contest. Why must they answer questions about issues of the day rather than rely solely on their appearance? In fact, appearance is probably the major determinant in the contest, so why is it not sufficient? Despite the fact that the contest is about beauty, beauty in itself is not perceived as productive or potentially productive. Each contestant needs to demonstrate that she can do something. In contrast, the contestant in a scientific competition is not judged on other dimensions,

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such as personal appearance, because the scientific work itself – the basis of the contest – is viewed as productive.

The productivity criterion generates disagreements over exactly who should be labeled as gifted. Some, for example, believe that a high score on an intelligence test is not sufficient grounds for labeling a person as gifted. These people see the tests as meaningless (e.g., Gardner, 1983) because the high-scoring person has not shown that he or she can do anything. Others view getting a high score on the test as doing something in and of itself. At worst, the high score shows the person's potential for productivity.

In childhood, of course, it is possible to be labeled as gifted without having been productive. In fact, children are typically judged largely on potential rather than actual productivity. As people get older, however, the relative weights of potential and actualized potential change, and emphasis is placed on actual productivity. Any number of gifted children become adults whom people do not think of as exceptional. Renzulli (1986) has referred to such adults as "school-house gifted."

People who do not realize their potential through some kind of productive work may still be labeled as gifted, but with qualifications. They may be called gifted individuals whose gifts somehow failed to actualize themselves. To earn the label "gifted" without qualification, a person must accomplish something.

In this book, we argue that there is good reason to think about productivity, or at the very least, potential productivity, as a criterion for giftedness. Simply receiving high scores on an IQ test trivializes what it means to be gifted. If one looks at organizations that accept only people with high IQs, one will find in those organizations some people who are contributing something meaningful to the world, and others whose sole claim to fame in their lives may be their IQ test scores. We shall argue here that such a claim – to be gifted solely on the basis of IQ – is a small one indeed: Truly to be gifted, you need to be productively intelligent, not just intelligent in some abstracted sense that makes no contact with the world outside the IQ test.

The Demonstrability Criterion

The demonstrability criterion states that the *superiority of the individual on the dimension(s) that determine giftedness must be demonstrable through one or more tests that are valid assessments*. The individual needs to be able to demonstrate, in one way or another, that he or she really has the abilities or achievements that led to the judgment of giftedness. Simply claiming giftedness is not enough. Thus, a person who scores poorly on all measures

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used in assessment and who is unable to demonstrate in any compelling alternative way that he or she does indeed have special abilities will not be viewed as gifted.

The assessment instrument(s) used, however, must be valid. Validity means that each instrument is shown to measure what it is supposed to measure. If, for example, a child presents a high score on a new intelligence test that requires only that the child dot i's, the results are unlikely to be valid. Dotting i's is not an acceptable measure of intelligence. Or suppose that a job candidate gives a persuasive talk, suggesting unusual gifts both in research and in presentation. But when asked about the content of the talk, he is unable to answer even the simplest of questions. Gradually, members of the audience conclude that the job candidate was somehow programmed, probably by his graduate advisor. In fact, he has no idea of what he was talking about. The job talk then would be invalid as a measure of the candidate because it did not actually reflect his gifts (or lack thereof), but rather, his advisor's.

The validity issue has become extremely important in recent years in the identification of intellectually gifted schoolchildren. In the past, many schools were content to use standardized intelligence tests, and perhaps grades in school and scores on achievement tests, as sole bases for identifying children as intellectually gifted. As the focus of testing has shifted more and more toward an emphasis on performance – and product-based assessment – however, some have questioned the sufficiency of the traditional measures (e.g., Gardner, 1983; Renzulli, 1986) as sole bases for ascertaining giftedness. Someone who would have been labeled as gifted under traditional measures might not now be so labeled. The implicit theory – folk conception – of giftedness may not have changed, but what is considered valid as a demonstration of giftedness may have.

The Value Criterion

The value criterion states that for a person to be labeled as gifted, *the person must show superior performance in one or more dimensions that is valued for that person by his or her society*. The value criterion restricts the label of giftedness to those who have attributes that are valued as relevant to giftedness. The individual who is #1 on the FBI's most wanted list might be superior in one or more dimensions, rare in his ability to perform certain malevolent acts, and able to demonstrate his skills upon demand. He may even be highly productive, if in a criminal way. But because what he is so good at is not valued by society at large, he is not likely to be labeled as gifted by the American populace. Still, it is quite possible that he would be

labeled as gifted by other bank robbers; the pentagonal theory allows that what is prized as a basis for giftedness may differ from one culture, or even subculture, to another.

Who is qualified to judge giftedness, anyway? Anyone can judge, although not all implicit theories are good ones. The pentagonal theory allows us to say that people of another place or time have erred in their evaluations of a person's gifts. If we do so, it is true that we are claiming a privileged position with regard to the identification of someone as gifted. We are arguing that our values are right because those of certain others were wrong, or because these others did not have access to information we now have. In either of these cases, we are claiming the privilege of being in a superior position to judge. What we must realize, of course, is that others may do the same with respect to us in some other time or place. They may view our criteria as quaint, obscure, or just wrong.

Implicit theories by nature are relativistic; there is never any guarantee that people's personal values will match across time and space. But implicit theories provide the best practical form or structure by which to identify the gifted. For a judgment to occur according to strict standards, one needs to add content to implicit theories.

The value criterion is the one about which our society has been least reflective. Many schools still use today the same bases for assigning the label of "gifted" that were being used a century ago. But the skills that are relevant to gifted performance may well have changed. For example, arithmetic-computation skill was more important in 1960 than in 2010, because in 2010 calculators and computers are available that were not available in 1960. Certainly our own skill in measuring giftedness has changed, although that change is not always recognized in educational practice. In Chapter 2, we will present a model that we believe is useful in capturing the attributes relevant for identifying gifted individuals in today's world.

TESTING THE PENTAGONAL THEORY

The pentagonal theory was intended to capture people's implicit theories, or folk conceptions, of what giftedness means. Does it? We conducted a study to determine whether the pentagonal theory did indeed capture people's implicit theories of giftedness (Sternberg & Zhang, 1995). College students as well as parents of gifted children were given descriptions of children. Each description gave six pieces of information about a child. Then the participants were asked to judge whether (a) they would identify the described student as gifted and whether (b) they thought the school would identify the described student as gifted. The descriptions were based

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on hypothetical students and hypothetical tests. In the example below, for instance, Bernadine is fictional and the Bader Creativity Test is fictional. Here is a sample item:

1. Bernadine's score on the Bader Creativity Test was good.
2. This score was in the top 20% of her school.
3. The Bader Creativity Test has been found to be accurate in predicting gifted performance for 40% of students.
4. The school considers the Bader Creativity Test to be a mediocre measure of giftedness.
5. Bernadine submitted four independent projects.
6. The school believes that independent projects are an excellent measure of giftedness.

Descriptions were the same for boys and girls, with only the names changed. Thus, for example, for half the students, "Bernadine" was "Seth." There were 60 descriptions in all, presented in three different orders across participants to minimize order effects.

Of course, not all items involved the Bader Creativity Test. In fact, each item involved a different test. Although the names of the tests were different, only six constructs were involved, balanced equally across items: creativity, intelligence (e.g., the Hunter Intelligence Test), social skills (e.g., the Perkins Social-Skills Test), motivation (e.g., the Bradley Motivation Test), and achievement (e.g., the Swanson Achievement Test).

The results were quite straightforward for both samples. Using a statistical technique called multiple regression, we found that all of the criteria mattered for both the individual's judgment and the school's judgment except demonstrability, which mattered only for self-judgments but not assessed judgments of the schools. That is, the participants thought demonstrability mattered but were not convinced that schools would. But from the standpoint of the individual's judgment, all five criteria did, in fact, matter.

IMPLICATIONS OF THE PENTAGONAL THEORY

Consider some of the implications of the pentagonal theory for questions that one might ask in the field of gifted education.

1. What percentage of children should be identified as gifted?

We have been asked this question many times, as though there is a single right answer. Of course, there is not. But the pentagonal theory helps us address this question by separating two often confounded concepts that ought to be distinguished: excellence and rarity.

Our use of norm-based measurement (in which measures are based on comparisons of one individual's performance with that of other individuals), which practically equates excellence and rarity, leads to confusion. All of us who have taught know that one year we may have an excellent class, in which many or even most of the students perform at a very high level, and another year we may have a weak class in which few people perform well. Criterion-based measurement (in which measures are based on performance relative to some external standard, regardless of how other students perform) helps us avoid confounding excellence with rarity. We need to think in criterion-based terms to answer the question regarding the "right" percentage to be identified.

One way of using the pentagonal theory is to suggest that we identify as gifted that percentage of students whose performance on some set of standards meets a present criterion of excellence and for whom we have the resources to provide special services. We thereby acknowledge that our limitations in identification reflect not only students' abilities but also our ability to serve such students. We need to consider excellence independently of rarity and to realize that we seek out rarity in part because of our inability to serve all students who may truly have very impressive potentials.

Historically, percentages have been chosen and then treated as though they are somehow nonarbitrary. But there is no one percentage that is truly a cutoff for giftedness. Indeed, it is not even clear what it would mean to have such a percentage.

2. What constructs or measures should we use to identify the gifted?

The pentagonal theory makes clear that there is no one right construct or measure, or even set of constructs or measures that we ought to use. Rather than simply doing what we do because it has always been done that way, we need to take responsibility for stating explicitly just what it is that we value and why. If we care about the potential of an individual to contribute to himself/herself, others, and society in a productive way, then we need to justify why the measures we use will help identify such potentially productive individuals.

Programming for the gifted can pass through various stages of sophistication. The least metacognitively (self-) aware formulators of programs for the gifted simply use whatever measures have been used in the past to identify the gifted in a way that is almost wholly lacking in reflection and self-awareness. Call them Stage I programmers. Stage II programmers, somewhat more aware of modern theories, may latch onto a particular theory of giftedness and use that, citing the theorist as their authority. These programmers have considered some alternatives. Stage III programmers are

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still more metacognitively aware and will be able to defend why they use a particular set of traditional techniques not clearly based in any theory. But the most thoughtful programmers, those of Stage IV, will not simply latch onto whatever happens to be around, with or without justification, but rather, will have a conception of what it is that they value and will then seek a theory or a combination of theories to help realize the system of values. Stage IV programmers realize that the use of an explicit theory (conventional theory formulated by experts) to help identify the gifted automatically makes a statement not only about the constructs with which the theory or theories deal (such as intelligence or creativity) but also about what is valued by those who will make identification decisions. In Stage IV, you first decide what you are looking for and then decide how to find it. Too often in the past, identification of the gifted has failed adequately to grapple with the question of “what are we looking for?”

3. What kind of educational program is ideal for gifted children?

Debates about the best program for gifted children take on a different character when viewed from the standpoint of the pentagonal theory. There is no one right answer to the question of what kind of program is best. Rather, we again need to ask ourselves what we value – best for what? If we value rapid learning and believe that rapid learners will be in an enhanced position to contribute to our society, then acceleration makes sense. If we believe that what matters is the depth or care students take in probing into what they learn, enrichment will be preferable. If both are prized, we might use a combination. Whatever we do, we should ensure that the values expressed in the instructional program are the same as those expressed in the identification program. If we select for rapid learners, we ought to teach in kind. Once we clarify what we value, we should then act accordingly. The reason that debates about how to teach the gifted go on indefinitely is that there is no one right answer.

In conclusion, the pentagonal theory provides a basis for understanding how people assign the label of “giftedness” to some individuals but not others. It suggests a framework supporting such judgments. Explicit theories of abilities, formulated by experts, fill in the rest.

DO WE STILL NEED A LABEL OF “GIFTEDNESS”?

We believe that the “gifted” label serves a value function in society. But we are skeptical with regard to the way the label is typically used. In particular,