

BUILDING GIFTS INTO TALENTS

TALENT DEVELOPMENT ACCORDING TO THE DMGT

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Introduction

The field of gifted education defines its special population around two key concepts: giftedness and talent. If you browse through the scientific and professional literature in gifted education, you will soon discover that the existence of two terms does not mean the existence of two distinct concepts. Most authors commonly used these two terms as Siamese twins in expressions like “the gifted and talented are...”. A few scholars (e.g. Joseph S. Renzulli, Robert Sternberg) even hesitate to use the term talent, focusing their whole conception of outstanding abilities on the concept of giftedness. When the two terms are differentiated, the distinction may take many forms. Some apply the term gifted to high cognitive abilities, and the term talented to all other forms of excellence (e.g. arts, sports, technology). Others consider giftedness to represent a higher order of excellence than gifted. Still others associate giftedness with some mature expression as opposed to a vision of talent as a crude or raw form of undeveloped ability. In other words, if we were to extract from major publications in the field all the proposed definitions for these two terms, we would easily end up with well over a dozen of them.

Whereas conceptions abound and often contradict one another, scholars keep mentioning one particular idea in almost every discussion of the giftedness construct. They acknowledge, implicitly or explicitly, a distinction between early emerging forms of giftedness, to some extent innate and usually manifested in childhood, and fully developed, adult forms of giftedness. They will express that distinction through pairs of terms like potential vs. achievement, aptitude vs. realization, promise vs. fulfillment. Rarely will these authors transform this fundamental distinction into clearly distinct constructs and labels. The Differentiated Model of Giftedness and Talent (DMGT) was conceived to exploit that distinction as the basis for a differentiation between the terms giftedness and talent. Here they are:

GIFTEDNESS designates the possession and use of outstanding natural abilities (called high aptitudes or gifts), in at least one ability domain, to a degree that places an individual at least among the top 10 % of age peers.

TALENT designates the outstanding mastery of systematically developed competencies (knowledge and skills) in at least one field of human activity to a degree that places an individual at least among the top 10 % of age peers who are or have been active in that field or fields.

As these definitions reveal, the two concepts share three characteristics: (a) both refer to human abilities; (b) both are normative, in the sense that they target individuals who differ from the norm or average (e.g. poverty, obesity, nanism); (c) both refer to individuals who are ‘non-normal’ because of outstanding behaviors. Assuming that most human abilities manifest themselves as normal – or bell curve – distributions, gifts and talents occupy the top 10 % at the right of that type of distribution. These three commonalities help understand why most professionals and most laypersons so often confound them. From these two definitions we can extract a simple definition for the process of talent development, namely the progressive transformation of gifts into talents. These three components, giftedness (G), talent (T), and the learning and practice (LP) that concretize the talent development process, constitute the basic trio of components within the DMGT.

Three additional components (see Figure 1) complete the structure of this talent development theory: intrapersonal catalysts (IC), environmental catalysts (EC), and chance (C). Moreover, as stated in the formal definitions above, the DMGT uses precise thresholds of excellence to quantify

the meaning of “outstanding”. This short overview of the DMGT is structured around three themes: (a) describing the six components, as well as (b) the prevalence issue, and (c) discussing basic rules concerning the dynamics of talent development.

I – The DMGT's six components

Gifts (G)

Within the DMGT, natural abilities are grouped into four aptitude domains (see Figure 1): intellectual/cognitive (IG), creative (CG), socioaffective (SG), and sensorimotor (MG). These natural abilities, whose development and level of expression is partially controlled by the individual's genetic endowment, can be observed in every task children are confronted with in the course of their schooling: for instance, the intellectual abilities needed to learn to read, speak a foreign language, or understand new mathematical concepts, the creative abilities needed to solve many different kinds of problems and produce original work in science, literature and art, the physical abilities involved in sport, music or woodwork, or the social abilities that children use daily in interactions with classmates, teachers, and parents.

High aptitudes or gifts can be observed more easily and directly in young children because environmental influences and systematic learning have exerted their moderating influence in a limited way only. However, they still show themselves in older children and even in adults through the facility and speed with which individuals acquire new skills in any given field of human activity. The easier or faster the learning process will be, the greater the underlying natural abilities will be. It is these high natural abilities that some laypersons call “talent” or, more appropriately, “natural talent”.

Talents (T)

Talents represent the outcome or result of the talent development process. They progressively emerge from the transformation of high aptitudes into the well-trained and systematically developed skills characteristic of a particular field of human activity. These fields can be extremely diverse. Figure 1 shows some of the many talent fields relevant to school-aged youth. But fields of talent cover a much larger spectrum. One can find talented individuals in almost any field of human activity: professions, business, administration, trades, technologies, services, social or health occupations, sports. In other words, the DMGT's concept of talent carries no aura of elitism. Even more, talents are not limited to lawful occupations; they can be found among pickpockets, thieves, or computer hackers!

Learning and practicing (LP)

This component includes all the activities and decisions taken by ‘talentees’ – a neologism describing the individuals actively pursuing a talent development process. It covers the whole course of that longitudinal process, from initial (self-)identification up until talentees end that process by dropping out or retiring. The process of talent development begins as soon as a child, adolescent, or adult starts the systematic learning and practicing of skills specific to a given field of activity, academic, occupational, or leisure-related. Three major developmental processes can be identified: (a) biological maturation (reserved for the development of natural abilities), (b) informal learning, and (c) formal learning and practicing. Formal learning may in turn take two forms, non-institutional or autodidactic as opposed to the more common institutional talent development found in academic institutions, music or arts schools, or sports training centers. Informal development characterizes the growth of natural abilities, whereas talents result essentially from formal learning activities. Note that the higher the level of talent sought, the more intensive these three activities will be.

Intrapersonal catalysts (IC)

In chemistry, catalysts facilitate and accelerate a chemical process. Here, their counterparts may exert - by their presence or their absence - both positive and negative influences. Intrapersonal catalysts are subdivided into physical and psychological factors (see Figure 1), all of them under the partial influence of the genetic endowment. Hereditary predispositions to behave in certain

ways (temperament), as well as acquired styles of behavior (e.g. traits and disorders), contribute significantly to support and stimulate, or slow down and even block, talent development. Self-management gives structure and efficiency to the talent development process, and to other daily activities. Among self-management activities, motivation and volition play a crucial role in initiating the process of talent development, guiding it and sustaining it through obstacles, boredom, and occasional failure.

Environmental catalysts (EC)

The environment manifests its significant impact in many different ways. The *milieu* exerts its influence both at a macroscopic level (e.g. geographic, demographic, sociological) and in a more microscopic framework (e.g. size and type of family, socioeconomic status, ethnic affiliation). The second sub-component, *persons*, covers social and psychological interactions between talentees and significant people around them. Not only parents and teachers, but also siblings and peers, may exert positive or negative influences on the process of talent development. Gifted education programs within or outside the school belong to the *provisions* category; they are a more systematic form of intervention to foster or hinder the process of talent development. Professionals in the field often subdivide them into three groups: enrichment (in the regular classroom), part-time (pull-out) or full-time homogeneous grouping, and accelerative measures (e.g. early entrance, grade skipping, Advanced Placement Program). Finally, significant *events* (the death of a parent, winning a prize or award, suffering a major accident or illness) can influence markedly the course of talent development.

Chance (CH)

Chance could be added as a fifth causal factor associated with the environment. But, strictly speaking, it is a characteristic of some of the elements placed in any of the other four categories (e.g. the “chance” of being born in a particular family; the “chance” of the school in which the child is enrolled developing a program for talented students). Chance is also a major causal factor in the determination of the genetic endowment.

II – Prevalence and levels

An adequate definition of any normative concept must specify how subjects differ from the norm and what it means in terms of the prevalence of the population subsumed under the label. In other words, describing their behavior as ‘outstanding’ does not specify enough how far above average they are. The DMGT includes a system of thresholds for both the giftedness and talent concepts; it is based on the metric system. The lowest threshold is placed at the 90th percentile. In other words, those who belong to approximately the top 10 % of the relevant reference group in terms of natural ability (for giftedness) or achievement (for talent) may receive the relevant label. This generous choice of threshold is counterbalanced by the recognition of five progressively more selective levels of giftedness or talent. The five levels of this metric-based (MB) system appear in Table 1, with their respective labels, ratios in the population, and IQ score equivalences. As in other fields of special education, the level of the student’s giftedness or talent as well as the domains or fields in which it is sited should guide the choice of the appropriate intervention program.

Table 1. Levels of giftedness and talent in the MB system

<i>Labels (for G & T)</i>	<i>Proportions</i>	<i>IQ equivalences</i>
Mildly	1:10	120
Moderately	1:100	135
Highly	1:1 000	145
Exceptionally	1:10 000	155
Extremely (profoundly)	1:100 000	165

III – A few dynamic considerations

In the DMGT, high natural abilities or aptitudes act as the “raw material” or the constituent elements of talents. Because these constituent elements get transformed into more specific talent-related skills, there is much more diversity among systematically developed skills than among their ‘natural’ precursors. A given natural ability can express itself in many different ways, depending on the field of activity adopted by the individual. For example, manual dexterity, one of many natural physical abilities, can be modeled into the particular skills of a pianist, a painter, or a video-game player. Similarly, analytical reasoning, one of many cognitive natural abilities, can be modeled into the scientific reasoning of a chemist, the game analysis of a chess player, or the strategic planning of an athlete.

The causal relationship between gifts and talents also implies that talent will rarely emerge from average aptitudes; talented achievements require at least above average aptitudes. And the higher the level of talent observed, the higher the underlying aptitudes will tend to be. The reverse is not true, however. It is possible for outstanding natural abilities not to be translated into talents, as witnessed by the well-known phenomenon of academic underachievement among intellectually gifted children.

The important role of gifts as builders of talents leaves much room to other significant causal influences from both types of catalysts (IC and EC), as well as the intensity of the talent development process itself (LP). The complexity of these interactions among causal factors confirms the uniqueness of each talented individual’s developmental path from early identification to peak achievements.

Suggested Readings

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FRANÇOYS GAGNÉ, PH.D.
Honorary Professor of Psychology
Université du Québec à Montréal (Kanada)
gagne.francoys@uqam.ca