



NORTHWESTERN
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Resources & ideas for parents & educators of gifted children

Talent

CENTER
for TALENT
DEVELOPMENT®

Director's Message



Why do some individuals with tremendous intellectual ability make wonderful, creative contributions to society and others who are equally talented, fail to live up to their potential? How does this happen? Trying to understand why some individuals succeed and others do not is the basic question of researchers, like Rena Subotnik, who we interviewed for this issue of *Talent*. She asks, "What does it take to turn raw potential into creative products that benefit humankind?" What Dr. Subotnik and other researchers have found is that the actualization of talent is a complicated process that involves many components, family support, school and community programs, mentors, as well as personal characteristics such as intense motivation and drive. Dr. Subotnik's research also indicates that not only are the right ingredients necessary, they must come at the right time in the person's life in order for the mix to work.

At the Center for Talent Development, we strive to meet the needs of young people and provide them with the tools and opportunities they require—at the right time—to reach their full potential. We hope this issue of *Talent* provides you with food for thought and some ideas for talent development in your own life.

Paula Abezushi-Kubilus

Talent Development

Gifted authority Rena Subotnik discusses "elite talent"

CTD: Much of your research has focused on the study of elite performers. Who have you studied and why did you choose these groups?

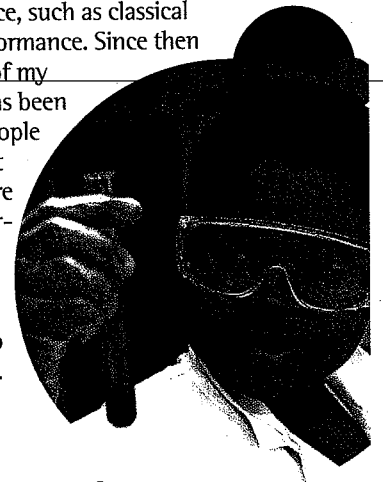
Rena Subotnik: As a beginning professor at Hunter College I had the opportunity to study graduates of the Hunter College Elementary School, a highly selective school in New York City. Although many people (myself included) thought the graduates would be exceptional achievers, it turned out they weren't. They were generally happy, healthy, and held values and jobs that you would expect given their upper middle class upbringing, but they weren't stellar performers as adults.

I was a graduate of Hunter College Elementary School myself, and my experience mirrored the study outcome. I was doing well professionally but had not made a distinctive contribution. I'm not even sure that was a central aspiration for me at the time. However, the outcome piqued my interest and was the impetus for studying people who were extraordinary and how they got to be that way. I realized that it's hard to predict outstanding performance in adulthood based on an elementary school experience so I looked for a group of highly talented adolescents to learn from.

I acquired access to the 1983 winners of the Westinghouse (now called Intel) Science Talent Search, the most prestigious national science competition. I followed the group for about 13 years — until they were in their mid 30s. As adolescents, the Westinghouse winners worked with scientists in hospitals or

university research labs helping to perform cutting-edge research. With their Westinghouse scholarships, many chose to go to elite universities. When they got there they discovered that science majors were told, "Everyone here is gifted." They were not given access to mentors or to courses that built on their unique experiences in high school. Instead they were herded into large classes designed to weed out students who were not academically prepared for high-level science. A majority of the young women and about half the young men in the group ended up pursuing other majors that were more inviting at those universities.

As a result of these discoveries, I wondered whether equally gifted individuals in other domains were encountering the same roadblocks at the same point in their development. I decided to pursue this line of study in a field completely different from science, such as classical music performance. Since then the focus of my research has been on how people in different domains are trained during the transition from adolescence to adulthood.



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**IT IS THE MARK OF AN EDUCATED MIND
TO BE ABLE TO ENTERTAIN A THOUGHT
WITHOUT ACCEPTING IT.**

"Elite talent" continued from page 1

CTD: What do you mean by "elite talent?" How is this different from giftedness?

Subotnik: Giftedness, unless it has some verbal appendage attached, such as "mathematically gifted," implies global abilities. I'm interested in domain-specific ability — scientific or artistic, for example.

CTD: What have you learned about the development of elite levels of talent? What are the most important factors involved? What are the key components or parts of the process?

Subotnik: I have been working recently with Linda Jarvin from Tufts University. She and I built our talent development model on the work of others who came before us. From the research literature we know that key factors in talent development are having a talent and the opportunity for instruction. We also know that psycho-social variables such as persistence, intrinsic motivation and drive play a role. What Linda and I have added to the equation is to say that it's not only important to know what variables are involved in talent development, but also when they are involved. Benjamin Bloom published a highly influential stage model of talent development that guided our thinking, but he didn't focus much attention on psycho-social variables. Francoys Gagné focused on psycho-social variables as catalysts for talent development but didn't discuss when each of the catalysts plays a key role in the developmental process.

CTD: In your view of talent development, what is the role of creativity and intelligence?

Subotnik: Intelligence is interesting to me as it relates to specific domains. For example, how can one operate intelligently as a composer, scientist, or journalist? Creativity transforms expertise into scholarly productivity or artistry. In other words, you can master a field and be an expert. But in order for you to make a contribution that furthers a field, you need to create something that is original and resonates with people.

CTD: Is the development of elite levels of talent applicable to non-performance domains such as science, math or writing?

Subotnik: The trajectory of talent development is similar regardless of the domain, but each domain has distinctive starting points. For example, math talent

tends to show up early; philosophy talent appears much later — but the same variables are involved.

CTD: What can parents and teachers learn from your research that could help their gifted students succeed?

Subotnik: That key variables in talent development change in importance over time. Let's look at the variable of parental pressure or support. Some children are innately motivated. Others may need parental pressure to do homework or other forms of practice because the act of practicing may not be intrinsically interesting. For example, until you reach a certain level of proficiency, playing the violin or speaking a language just isn't all that rewarding. But once students are over the basic skills hump, pressure becomes decreasingly effective. Parental involvement needs to take the form of providing space to work, getting materials, mentors, courses, etc.

Second, it's very important to expose talented students to teachers who excel in the child's area of expertise. This too should be done in stages — as children progress, they need different types of excellent teachers because they need different types of instruction at each stage in their development. According to Benjamin Bloom the first teacher nurtures the young person's love of the field. A second teacher guides in the development of expert skills and knowledge. A third helps with professional contacts and insider knowledge.

The third point I'd want parents to take away is that over time psycho-social variables play an increasingly central role in talent development. Parents should model persistence, resilience, and good social skills for their children.

Talented children need to learn how to deal with failure and be graceful in success. They must understand that setbacks are part of the growth process and that they shouldn't fall apart when it happens. Bumps in the road are part of the game of life. ●

Resources

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Rena F. Subotnik began her position as Director of the Center for Psychology in the Schools and Education at the American Psychological Association (APA) in January 2002. Before she came to APA, Dr. Subotnik was Professor of Education at Hunter College, where she coordinated the secondary education program and served as research and curriculum liaison to the Hunter College laboratory schools (grades PK-12). From 1983 to 1996, Dr. Subotnik conducted a longitudinal study of Westinghouse (now Intel) Science Talent Search winners.

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