

October 15, 2008 *Giftedness Unwrapped* column for *Understanding Our Gifted*

Issue focus: Giftedness & the Brain

Giftedness Unwrapped

By Dr. Dona Matthews and Dr. Joanne Foster

Each of us, Dona and Joanne, has been thinking about giftedness and its development for many decades now. We are parents ourselves and have been grappling with gifted learning needs from very personal perspectives. We're also teacher educators and educational consultants who specialize in gifted development and education. We work with teachers and schools in a number of different ways to implement sound practices for gifted learners, and with parents to help them support gifted development in their children.

Both personally and professionally, we have encountered some widespread misconceptions that get in the way of parents and educators fostering and supporting gifted development in the children in their lives. In this column, we address some of these misconceptions, unwrapping giftedness and demystifying it. In future columns, we will continue to unwrap some of those bulky layers that make understanding giftedness far more complicated than it need be, and we will uncover an aspect of high-level-development that is at the forefront of what parents and teachers need and want to know. We illustrate our ideas with stories from our case files of children, families, classrooms, and school systems, stories that shed light on what giftedness is (and isn't) and how it develops.

**Gifted Identification and Brain Development:
Tests are Limited, But Human Potential Is Not**

"Not everything that counts can be counted, and not everything that can be counted counts."

Albert Einstein

Identifying giftedness is one of the thorniest areas in gifted education. There is no consensus on how best to do it, and many controversies about what's wrong with identification processes and how to fix the problem. And, of course, there is much written on solving this dilemma.

Sometime when problems persist, it is because the nature of the matter itself is misunderstood, and the wrong questions are being asked. Is that why gifted identification practices and solutions don't always make sense? We address this here, and think about recent findings on brain development, and how they might inform identification policy and practice.

Carolynn is a bouncy 6 year old who puts on dance recitals with her friends, complete with songs and costumes. She hates wasting time on anything she doesn't invent, or that doesn't result in a creative product. Coming home from an IQ test where she was being considered for gifted identification, she grumbled, "I hope I don't ever have to do that again, Daddy. It wasn't even a little bit fun!"

Danya is an 8 year old who taught herself to read at age 4, and has been studying Egyptian hieroglyphics. Her younger brother is ill, and her parents had to admit him to the

hospital the day before she took “the gifted test” at her school. Because she was worried about her family, she had no energy for answering the challenging questions the psychologist asked her.

Most of us would agree that Albert Einstein was a genius, but his teachers saw him—quite legitimately—as a not-too-swift problem student. With his highly specialized abilities in some areas, and deficits in others, he would not have been nominated for gifted testing, and probably wouldn’t have done too well if he’d been tested.

These stories illustrate some of the problems with traditional methods of identifying giftedness. In each of these cases, there are good reasons to think that the child would not have been identified as gifted, and also that the “not-gifted” designation would be wrong. Is there anything in the emerging research on brain development that might shed light on gifted identification policies and practices?

The Barriers are Tumbling

Recent findings in the neurosciences are demonstrating the remarkable ability of people to learn a lot more than used to be thought possible, even under limiting conditions like Down syndrome, or following certain kinds of brain damage. Scientists are demonstrating that very often the brain can repair itself if needed, and—this is very encouraging—continue to grow and develop as long as it continues to be used, stimulated, and challenged. The upper limits of people’s learning potential cannot be precisely charted, and the “Use it or lose it” principle applies to cognitive functioning as much as it does to physical fitness. In challenging the barriers and limits that people used to think were fixed, exciting possibilities are opening up for those who want to learn more about optimal human development across the lifespan.

We Can't Tell Who Is Not Gifted

It is not just at the lower end of the ability spectrum, or in problem situations, or at the upper end of the aging continuum, that these brain-related findings matter. Neural plasticity—the dynamic flexibility and individual variability of brain development—also has important implications for those who are interested in gifted development. It suggests that under the right circumstances exceptional abilities can develop in children who would never have been considered for gifted education before. It also illustrates how careful we have to be in interpreting the not-gifted test scores of people like Carolynn, Danya, and little Albert Einstein.

Additionally, current findings in brain research support the idea that people who have gifted-level abilities generally have strengths only in domain-specific areas, rather than across the board in everything. Based on these findings and what is being learned about cognitive development it makes more sense to say that people may show evidence of mathematical, linguistic, or musical giftedness, for example, rather than to categorize some children as globally “gifted”, and others as “not gifted.”

As Einstein’s quote about counting suggests, when a child does not score at the gifted level, it may be the test itself that is at fault – that is, too often, what counts isn’t being counted, and that what is being counted doesn’t really count. For Carolynn’s giftedness to shine, she needs opportunities to show her capacity for creative invention. Danya’s giftedness is unlikely to be identified until she’s less anxious about what’s happening at home, and is able to concentrate again on intellectual challenges. Einstein would have shown up as gifted on a test that emphasized spatial and mathematical reasoning, but not on one that averaged his linguistic and other abilities—as is the case with IQ tests.

An important policy implication, then: it doesn't make sense to say that a given child is "not gifted." If your child doesn't make the gifted cut, don't conclude that he isn't really gifted, or that she's "almost gifted". Instead, you might say that he or she didn't test at the gifted level on a certain administration of a certain test at a certain time. Test results don't always reflect a child's ability or opportunities for growth, and, because the brain is always changing and amenable to learning, somewhere along the line one or more exceptionalities may yet come to light. Current research on the brain and its development shows that tests of intelligence and ability are far more limited than human potential.

The fact that we cannot say that a given child is NOT gifted does not mean, however, that gifted identification is a waste of time. Quite the contrary. There are many children who have gifted learning needs, and it is imperative that these be identified and addressed. But that is a topic for another day...

Next column: Who DOES have gifted learning needs?