Savant Syndrome Reading

As explained in the text, savant syndrome is a condition in which people with serious mental handicaps, either from retardation or major mental illness (early infantile autism or schizophrenia), have spectacular islands of ability or brilliance. Some have skills that are remarkable in contrast to the handicap (talented savants or savant I); others have an ability that would be spectacular even in a normal person (prodigious savants or savant II). The syndrome is six times more common in males than females and occurs for a very narrow range of skills—calendar calculating, music (almost exclusively limited to the piano), lightning calculations and mathematics, art, mechanical ability, prodigious memory, or, rarely, unusual sensory discrimination abilities (smell or touch). When the condition was first described in 1887, the person with the syndrome was called an "idiot savant," with "idiot" referring to a level of intelligence below 25 and "savant" meaning a learned person. The term "idiot" was improper from the beginning simply because the savant's intelligence is above 25, usually in the range of 40 to 70.

Darold Treffert’s Extraordinary People is an excellent source of lecture material on savant syndrome. Among the remarkable case studies you can share with your students are the following:

George and his identical twin brother Charles can give you the day of the week for any date over a span of 80,000 years. Ask them to identify the years in the next two centuries in which Easter will fall on March 23 and they will give correct answers with lightning speed. The twin brothers can describe the weather on any day of their adult life. At the same time, they are unable to add or count to 30, and they cannot figure change from a $10 bill for a $6 purchase.

Kenneth can accurately cite the population of every U.S. city over 5000; the distance from each city or town to the largest city in its state; the names, number of rooms, and locations of 2000 leading hotels in the United States; and statistics concerning 3000 mountains and rivers. Kenneth has a mental age of 11 years and a vocabulary of 58 words.

Upon hearing Tchaikovsky's Piano Concerto No. 1 for the first time in his teen years, Leslie played it back flawlessly and without hesitation. He can do the same with any other piece of music, no matter how long or complex. Leslie is severely mentally handicapped and blind, and he has cerebral palsy.

Ellen, also a musical genius, constructs complicated chords to accompany music she hears on the radio. She was able to repeat the soundtrack of the musical Evita after hearing it only once, transposing orchestra and chorus to her piano by using complex, precise chords, including intense dissonances, to reproduce mob and crowd noises. Like Leslie, Ellen is blind and has an intelligence score of less than 50.


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Although savants are aware of their talents, they cannot explain how they work. Alonzo Clemons, a retarded Denver man whose animal sculptures fetch upwards of $45,000, simply says God gave him his talent. Robert Black, a "calendar calculator" who can figure out the day of the week on which your birthday will fall in 3314, explains, "I got a good mind." Bernard Rimland, director of the Institute for Child Behavior Research in San Diego, notes that "sometimes savants give explanations that are meaningful only to them-things like, 'Because eleven.'"

Savant researchers have not been able to explain these unique abilities, although several theories have been advanced. For example, Rimland notes that underlying all savant abilities is a seemingly limitless memory. The savant’s musical ability is not in composition but rather in an uncanny ability to play back, note for note, long passages heard just once. Savant art is not remarkable for its creativity but for its realism-exact copies of animals or people or scenes done from memory. Rimland theorizes, "The reason you and I can't multiply four-digit numbers in our heads is that we get distracted. Nine times seven, carry the two-I wonder if the parking meter's about to run out-and four sevens is-hey, how'd I get that stain on my shirt?" In contrast, savants do not have distractions; the brain is dedicated entirely to the task at hand.

In a review of the literature on the savant syndrome, Leon Miller concludes that the skills exhibited by savants are in many ways similar to those of experts not having a disability. This finding clearly challenges the notion that rote memory is the core savant skill. Furthermore, the specific skill of the savant is usually accompanied by normative levels of performance on at least some subtest of standardized intelligence measures. For example, one study found significantly higher WAIS scores on digit span and block design in a sample of 11 calendar calculators. Different cognitive strengths may be associated with each savant skill, although the link between the strengths found on certain tasks and the exhibited skill is not clear. Finally, the case-history literature has long suggested that savants are highly motivated to perform their skill and, when given the opportunity, devote considerable time to it. Although no study has uncovered a motivational dimension distinctive to all savants, it appears that motivation is part of a set of predisposing factors that promotes skill development.

Although the central purpose of savant research has been to find ways to treat or prevent the syndrome, Treffert notes that, "There’s so much these people can teach us about ourselves-about memory, about its relation to intelligence and creativity. . . . And when we understand savants, perhaps we'll also have gained an avenue to the genius that, I believe, resides in all of us."
