

eye contact

Meeting the needs of children with impaired
vision and additional learning difficulties

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Signs of intent: developing communication skills



Royal National Institute for the Blind

Derek Paravicini: A Boy with Extraordinary Musical Abilities

Derek, now a vigorous 12 years old, was born frail and premature at just 25 weeks, weighing only 23 ounces. In the efforts to keep him alive that followed, high levels of oxygen were administered that irreversibly damaged his retinas, leaving him with only the perception of light in one eye. Moreover, in the ensuing months and years, it became increasingly apparent that Derek had severe learning difficulties. Today his capacity to understand and to reason, the substance of many of his thoughts and feelings and his ability to express these in words are, in round terms, those of a two and a half year old.

Yet when Derek actually was two and a half, his musical development had already outstripped that of most adults. Even at this tender age, once he had heard a tune, Derek would always remember precisely which note it started on; and although unable to express it in words, he would notice if one piano were tuned even slightly differently to another. Most impressive of all, when he listened to musicians performing together - even in a large orchestra - Derek could tell which note each of them was playing. By the time he was four and a half, Derek was a fluent, if technically rather chaotic pianist, capable of playing by ear anything that was within the reach of his tiny hands. When he was only nine, Derek played jazz with a leading London orchestra at a major venue in the capital and his startling talent was internationally acclaimed on the radio and television. His story was featured in newspapers and magazines all over the world, in countries as far afield as Australia and China.

It is hard to contemplate such an extraordinary mixture of ability and inability. Here is someone who, in everyday life, frequently confuses his right hand with his left, and has little awareness of his fingers and thumbs as distinct entities. Buttons, buckles and the like are quite simply beyond Derek at present. Yet the moment his fingertips sense a keyboard beneath them, all their infantile gaucherie evaporates and his hands become a miracle of precision and control. With a sparkling dexterity, notes are sent cascading from all over the piano keyboard.

Here is someone who in everyday life has almost no understanding of basic concepts such as 'same' and 'different', yet can process the most complex aural input - from the symphonies of Shostakovich to the high-speed scat extravaganzas of Ella Fitzgerald - with an efficiency that would be the envy of most professional musicians. Here is someone who finds it virtually impossible to remember a sequence of two simple instructions yet can effortlessly recall hundreds - even thousands - of pieces of music, amounting perhaps to millions of individual notes.

How are we to account for these seeming paradoxes? Various theories are discussed in two recently published and highly readable books: one by Darold Treffert called *'Extraordinary People'* (published by the Bantam Press, London & New York, 1989) and the other titled *'Musical Savants'* by Leon Miller (published by Lawrence Erlbaum Associates, Hillsdale, New Jersey, in the same year). Psychologists say that Derek, and people like him, have Savant Syndrome, deriving from the earlier (and to modern ears somewhat derogatory) French term 'idiot savant', meaning 'wise fool'.

Savants characteristically have one or two islands of special ability within a sea of intellectual and emotional underdevelopment. 'Autistic' traits are typical: savants often find verbal communication problematic, have difficulty in forming relationships, exhibit obsessive patterns of behaviour, and display erratic changes of mood. Although music seems to be the most common focus for their energies, savants have made wonderful sculptors and artists too, as Stephen's meticulous line drawings which now run to two published volumes, show. Perhaps the most bizarre manifestation of savant syndrome is found in the 'calendrical calculators'. Unable to perform the simplest arithmetic, these people can nevertheless work out from your age and date of birth which day of the week you were born, an astonishing feat usually performed in a matter of seconds.

A high proportion of musical savants are severely visually impaired, and have been since birth. What needs to be established



next is how many people out of the total MHVI population are musical savants. Up to now, records have been kept only sporadically, often anecdotal in form and often, hopelessly exaggerated.

It is easy to see how misunderstandings can arise. For example, during the filming of an early television programme about Derek, the director was keen to see how quickly the eight year old could learn a new piece of music. The problem was finding something he hadn't heard but would be reasonably familiar to the television audience. "Do you know the song *Moonlight* from the musical *Cats*?", Derek was asked. The reply firmly in the negative, a recording was hastily obtained from the BBC, and the cameras rolled as Derek obediently listened once and, sure enough, reproduced the tune and harmonies flawlessly first time. It was only later I found out that this was a favourite piece at home!

In fact, Derek's short-term memory is very weak and he finds it difficult to remember three or four notes on a first hearing. The way Derek learns pieces - which he does extraordinarily well - is by listening to them once or twice a day over a period of a week or more (depending on their length and complexity). But ever since that fateful occasion, the note of instant recall has plagued him. Once, at a rehearsal for a concert, a violinist played the solo part of a

concerto through, with the expectation that Derek would not only be able to remember this twenty minutes or of music, but somehow be able to realise the unheard orchestral parts on the piano too! I can't think of a musician in history who could have performed such a feat.

Yet, ironically, Derek does have outstanding qualities that go largely unnoticed. The singer who unwittingly starts a song on the 'wrong' note - something which would drive most pianists to distraction - is no problem for someone with Derek's capacity for instant transposition, no matter how intricate the accompaniment may be. In fact, every piece in his vast repertoire can be performed in a key of your choice (that is, starting on any note), a facility that I still find mesmerising.

For the moment then, no figures are available to indicate the likelihood of a young multihandicapped visually impaired child developing exceptional musical abilities, and one can only rely on personal experience. A decade of working in this field has brought me into contact with eight savants whose musicianship would be judged exceptional by any standards, out of a total of around four hundred MHVI children and young adults. This wholly unscientific survey yields a figure of around 2%. Of greater value perhaps, is the observation that of the eight savants I have taught, all but two are male; five, like Derek, have *retinopathy of prematurity*, and

two have an inherited disorder known as *lebers amaurosis*. Clearly, it would be worth the while of those involved with very young children who have either of these conditions to be especially vigilant in looking for early signs of heightened musical interest and potential.

A first indication may be a particular fascination for music - does the baby concentrate intensely, even obsessively on certain sounds, instruments or pieces? Do his or her vocalisations or songs seem to be particularly tuneful? Does he or she enjoy handling musical toys and is the play systematic? At a slightly later stage, the child may be observed picking out the first simple tunes on the piano or other instrument. If any of these tendencies are observed, it is essential to seek the immediate advice of a first rate teacher who is both a fine musician and sympathetic to the child's cause. I have known parents to be put off seeking suitable tuition because of their embarrassment at the eccentric or unpredictable behaviour of their child, but on no account should one allow this to become an obstacle.

It may well be that through developing the child's ability to express him or herself in sound, a significant improvement in behaviour will follow. Nor should the fact that the child is very young be a reason for not acting. It is often in the first few months and years of life that many major musical prejudices and propensities are established.

And it is a feature of savants - for me, their most remarkable achievement of all - that, left to their own devices, they will teach themselves to play. Yet such action is fraught with danger. In the absence of a visual model, it is all too easy to lead oneself up a technical cul-de-sac from which later retreat can be an agonising, even futile process. One can only stress again the importance of appropriate early intervention.

But beyond these particular circumstances, surely the most important lesson we can learn from Derek's story is to ensure that all young multihandicapped visually impaired children have the best possible music-educational provision. Of course, it is unlikely that they will ever perform at the Royal Albert Hall but music may play just as large a part in their lives as it does in Derek's. It may provide them with a means of oral communication, a medium for socialising with others or with an incentive to move. Different pieces of music associated with different activities may help a child to understand the structure of his or her day. For some, just listening to music may be their greatest source of pleasure, enhancing their quality of life above all else. ■

Adam Ockelford

Adam is Head of Music at Linden Lodge School for the Visually Impaired in Wandsworth, London, where Derek is currently a weekly boarder.



New Music Centre

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The therapists use a creative approach, helping the children to respond to musical sounds in their own individual way. This reciprocal relationship gradually allows the child to express him/herself both emotionally and communicatively. The Centre is

a registered charity. For more information contact: **The Nordoff-Robbins Music Therapy Centre, 2 Lissenden Gardens, London NW5 1PP. Tel. 071-267 4496.**