Variations on a theme

In the early 1950s the blind French organist, André Marchal (1894–1980), gave a recital on the new Harrison organ in the Royal Festival Hall. The next day, in one of his eccentric but erudite tutorials, the neurologist William Goody (1916–2004), himself an organist, explained how integration of the nervous system, memory and heightened perception allowed such a performer, prompted by the touch of the organ bench on the side of one thigh, to swing into position and manipulate an instrument with five manuals and more than a hundred speaking stops. Such a feat is, of course, only possible when the relevant parts of the brain are intact. In another neuromusical dissertation Sir Charles Symonds (1890–1978) described a patient who had lost his speech after a stroke. With encouragement, however, he was persuaded to ‘chant with me the lines of Three blind mice’ whereupon he seized a pen and wrote, ‘it reminds me of Dr Johnson’s (1709–1784) observation that anything that is too silly to say can yet be sung’. Clearly, despite the loss of speech, the patient’s intellect and the arts of writing and singing were preserved.

The relationship between speech and music becomes even more complicated when a blind musician has a stroke, for the raised dots that are the basis of reading and writing in Braille are also used, in a different context, for musical notation. The paper by Fisher and Larner1, which appeared in the November 2008 issue of this journal, gives a fascinating account of what happened to this form of communication when, at the age of 77, Jean Langlais (1907–91), a pupil of Marchal’s, had a stroke while playing at Mass in the cathedral of Dol-de-Bretagne (such activities clearly merit a risk assessment, for the blind organist Louis Vierne (1870–1937) died at the console of the organ of Notre Dame!). The lesion was in the left temporal lobe and, although the right hemiplegia cleared within weeks, the patient was left with an impairment of comprehension and expression that involved both speech and writing (in Braille). Clearly this was a ‘central’ problem, for he could still identify and write Braille signs and could articulate and comprehend simple orders. His musical ability, by contrast, returned quickly to normal and he had no difficulty in reading and writing music in Braille. His only problem was that, while he could sing a note and recognize and pick up a tune, he could not name these. In other words, his use of Braille symbols for reading and writing was severely impaired whereas his use of the same symbols for musical activities of the highest order was unimpaired.

This article should be read in conjunction with a personal record2 written shortly before his death by Professor Ian McDonald (1933–2006) who, in addition to being a distinguished neurologist, was an accomplished pianist; those who were at The National Hospital in Queen Square in the mid-1960s will recall the sound of a mess piano getting some unusually strenuous exercise. At the age of 72 he sustained an embolic infarct in the right supramarginal gyrus which produced the very reverse of the symptoms experienced by Langlais. Although McDonald did not suffer a hemiplegia and (due to agnosia?) was indeed unaware of this event for some weeks, in retrospect it was evident that ‘all was not well’. He was able to read and write in a normal manner and managed, with difficulty, to give an eponymous lecture at the Royal College of Physicians. He did, however, notice problems with keeping track of documents, with calculations, with estimating time, with interpreting a map, with judging the speed of approaching vehicles, with recognizing faces and even with dressing; but what really alarmed him was the realization that when playing familiar pieces he was striking many wrong notes and ‘could not get the rhythm’. The ‘sounds I heard bore no resemblance to the pieces I knew’ and the ‘musical notes that convey information by their position on the stave meant little’. So bad was this problem that he was unable even to turn the pages of a well-known score for another pianist ‘because the notes on the page bore no resemblance to the sounds I heard’. If notes were laboriously converted into letters they had some meaning but a simple melody, correctly but laboriously picked out after this sort of translation, did not make musical sense. The paper gives details of other problems encountered and of the manner in which, with assiduous practice, a large measure of recovery occurred over the ensuing 12 months.

Langlais, therefore, had an obvious hemiplegia and a persistent problem with verbal communication but his understanding of the musical significance of Braille symbols and his performance as a musician were unimpaired. McDonald, by contrast, lost his ability to understand musical notations and to play the piano but had no hemiplegia and could read and write with ease. Langlais could whistle a note but could not name it. For McDonald a written note had no meaning unless it was ‘translated’ into the corresponding letter. To one with a limited knowledge of music these are fascinating accounts. For the cognoscenti the wealth of detail will make them even more valuable.

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References
2 McDonald I. Musical alexia with recovery: a personal account. Brain 2006;129:2554–61