

## **Musical Mandarins**

SCIENTISTS have discovered an unusual tip for parents who want their kids to grow up to be musical geniuses – teach them Mandarin Chinese.

Psychologists at the University of California in San Diego have found that children who learn Mandarin as babies are far more likely to have perfect pitch. That's the ability to name or sing a musical note at will. They're better than those raised to speak English. Perfect pitch, though common among the great composers, is extremely rare in Europe and the US. Just one in 10,000 there is thought to have the skill.

Diana Deutsch, who led the research, believes the explanation lies in the different use of tones in the two languages. The meaning of English words does not change with tone, the same is not true for Mandarin. Or with other tonal languages, such as Viet Namese, Thai, and Chinese dialects.

Deutsch discovered the connection when she tested first-year students from the Central Conservatory of Music in Beijing. All of them spoke Mandarin. She also tested students at the Eastman School of Music in New York, who all spoke English.

Each of the students was asked to name 36 notes played at random from a keyboard. The researchers found that of the students who began music lessons between the ages of four and five, 14 per cent of Americans had perfect pitch. That was compared with 60 per cent of Chinese. When children began music lessons later in life, their chances of having perfect pitch dropped dramatically.

"The findings support the notion that babies can acquire perfect pitch as part of learning a language, which can later generalize to musical tones," said Deutsch.

But while learning Mandarin appears to give children a better chance of developing perfect pitch, some parents might appreciate a simpler method.

A good alternative, Deutsch said, might be to let babies play with keyboards with different notes labelled or coloured. As with language, learning perfect pitch is likely to be easier around the ages of six to 18 months.

The British composer Michael Berkeley said: "If you are using a language where pitch is so much more important, your whole perception of pitch would be more accurate. The musicality of a language does make it easier to understand pitch."

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