

In the news

SETTING THE TONE

A study published this month in *PNAS* revealed a correlation between genes that control brain size during development and the features of languages spoken in different cultures.

Linguists divide modern languages into tonal languages, in which pitch confers meaning, and non-tonal languages. But whether genetic factors influence the type of language spoken was unknown. The researchers identified a link between more recently evolved variants in the genes *ASPM* and *microcephalin* and the use of non-tonal languages, which "...gives us an idea that there is a genetic side to things", according to Patrick Wong of Northwestern University, USA (*ScientificAmerican.com*, 29 May 2007).

As both genes are involved in brain development, the variants might alter the anatomy of brain regions that determine our ability to use pitch to understand language. Robert Zatorre at McGill University, Canada, notes that the study highlighted the "...possible link between genetics, brain anatomy and language" (*ScienceNOW Daily News*, 29 May 2007).

It has been suggested that these gene variants have undergone positive selection. Could non-tonal languages provide an evolutionary advantage? Bernard Crespi of Simon Fraser University, Canada, thinks that this is possible, saying that they might allow for "...faster acquisition of language..." (*NewScientist.com*, 28 May 2007). However, the senior author of the study, Robert Ladd of Edinburgh University, UK, disagrees, saying that there is "...no reason to think that non-tonal languages are ... more fit for purpose..." (*NewScientist.com*, 28 May 2007).

Researchers agree that further work is required to determine whether the observed correlation indicates a causal effect, but are optimistic. Wong says that this may be "...the first of many possible studies that we could do to try to find a genetic basis for language..." (*ScientificAmerican.com*, 29 May 2007).

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