

Musical protolanguage revisited

Keelin Murray

keelin@ling.ed.ac.uk

Language Evolution and Computation Unit,
Linguistics and English Language, University of Edinburgh

There has long been interest in possible evolutionary links between music and language, with many scholars taking their lead from Charles Darwin's 1871 discussion of a protolanguage based on tonal cadences, i.e. singing.

The current research proposes the development of a musical protolanguage from an initial system for coordination based on simple isochronous rhythmic signaling. Drumming behaviour is seen in the African apes, chimpanzees and gorillas, which indicates that the ability to map motor pulse onto acoustic motor behaviour was present before the emergence of the separate human lineage (Fitch, 2005).

With human evolution, this rhythmic system may have been appropriated to signal cognitive fitness. This evolved system must have been complex enough to take time and effort, cognitive energy and skill to learn, and thus could not be faked or easily genetically encoded. Thus, complexity in rhythm could be a reliable and honest signal of cognitive ability. The rhythmic coordination system may have further evolved into a rich, structured substrate, which could be appropriated for the communication of complex meanings.

Therefore, cultural evolution took language in a different direction to music. Music remained isochronous and relevant to bonding and emotional manipulation, while the linguistic protolanguage outlined above evolved into complex, structured language for the communication of complex propositions.

Experiments-in-progress will be presented, which aim to investigate this hypothesis, by measuring subject's ratings of complex and non-complex rhythmic stimuli.

References

Darwin, C. (1871/1901). *The descent of man and selection in relation to sex*. 2nd edition, London: Murray

Fitch, W.T. (2005). The evolution of music in comparative perspective. *Annals of the New York Academy of Sciences*, 1060, 29 - 49

