

The co-evolution of music and language

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Music and language have numerous similarities. They share the principle of compositionality, the use of a finite number of units to create phrases that are more than the sum of their parts and potentially infinite in number. Both can be expressed by the voice, by the body – as in singing and dancing – and in written form. They are typically undertaken as a form of communications between individuals and groups but can also be pursued alone. And yet, music and language are also profoundly different: words and spoken utterances have semantic meanings that are shared within a speech community; musical tones and phrases do not. Music may induce a shared emotional response but, unlike language, lacks any informational content.

The overlaps between music and language have long suggested they have a shared evolutionary history, with the most recent arguments favouring their role in building social bonds between individuals. Indeed, we can find traces of both musicality – variations in rhythm and pitch - and word-like sounds in the holistic vocalisations of non-human primates, notably chimpanzees with whom we shared a common ancestor between 8-6 million years ago. If they provide a model for the vocalisations of the common ancestor, we then need to use the paleoanthropological record to trace when, why and how that single communication system became partitioned into what we today recognise as the separate systems of music and language. Was that with the first appearance of *Homo* at 2.8 million years ago, with modern humans at 150,000 years ago, or somewhere in between? By drawing on my previous research published within *The Singing Neanderthals* (2007), and more recent work within *The Language Puzzle* (forthcoming, 2024), I will suggest the divergence occurred within *Homo erectus* at c. 1.5 million years ago when the first words emerged from what had been holistic ape-like calls. Those words provided the first towards language and liberating the remnant holistic calls to focus on the unique roles that music accomplishes today.