# Music and human evolution

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After being closed to the public for the past six months, the Natural History Museum's Hintze Hall reopened on the 13 July 2017, featuring a grand blue whale skeleton as its central display. This event carried particular importance for OUP's Gabriel Jackson, who was commissioned to



Milton. With this piece Gabriel maps processes and theories of evolution onto music. The idea that evolution can be expressed through music poses some interesting questions; what happens when you consider this relationship from an alternative angle? How has music evolved with humans over time? In his chapter "Music and Biocultural Evolution" Ian Cross, Professor of Music and Science at the University of Cambridge, provides some interesting ideas.

Although most modern scholarship on music only stretches back to the 1100s or so, music is truly ancient. The earliest example of sophisticated musical instruments (in the form of pipes made of bone and horns) date to around 40,000 years ago. Whilst this may not sound that far back, this predates all examples of visual art.

These early instruments were found in Germany; however, much like today, musical production was not only centred in this part of the world. In fact, there is evidence of music having existed globally at this time, with music production being found in places as far-flung as the pre-Hispanic Americas and the Aboriginal people of precolonial Australia.

It is generally assumed that the creation of these very early physical instruments occurred significantly after the human capacity for musicality developed. As such, it is likely that other methods of music making that do not involve sound production from instruments, such as singing, date much, much further back than 40,000 years. According to Cross, this assertion provides good grounds for believing that music may have accompanied humans from the earliest signs of modern activity.

*Four skulls in a row, by JuliusKielaitis © via Shutterstock.*

Of course, in order for these theories of music as a product of evolution to withstand scrutiny, Cross and other scientists have to rely upon a much more malleable notion of music than that which we often use today. According to the *Oxford Dictionaries* music is, "Vocal or instrumental sounds (or both) combined in such a way as to produce beauty of form, harmony, and expression of emotion." This definition is unlikely to fit with notions of pre-modern music, and, indeed, does not fit *all* music that is produced today. Some people, for example, may find it quite difficult to perceive a sense of form or harmony in a work such as this:


The notion that all music fits within the definition posed in the Oxford English Dictionary could therefore be considered a little Western-classical centric; however, the fact that all music expresses emotion is an inescapable truth. Whilst the emotions felt are often specific to an individual, it is unlikely that one would listen to a piece and feel nothing at all.

In addition to expressing emotion, there are also a number of other persistent similarities to be found when establishing the traits of music across cultures. For example, music nearly always carries some form of complex sound event (such as structured rhythms, or pitch organisation) over an underlying regular pulse. This is true regardless of the genre of music that is being listened to. When considering the importance of time in a musical performance, and the transition of emotions, then, some suggestions begin to emerge regarding the reasons why music may have evolved with us.

Cross outlines that, through allowing people to create something together via a regular pulse or beat, musical sounds may have provided a means through which people could envisage that they were sharing each other's experiences, thus fostering social bonds.

Similarly, music's capacity to transmit emotions that are felt by everyone, yet specific to an individual, may suggest that it was created as a way of understanding individual and group feelings, particularly in times of social uncertainty. Indeed, as Cross states, the ability to share emotions and "intentionality" is fundamental to our *capacity for culture*, the possession of which is assumed be a generic feature of modern humans.

Music's ability to create and maintain social relationships, alongside its direction and motivation of human attention, is likely to have been incredibly important to the survival of pre-modern humans. When taken outside of its more modern context of entertainment, it is indeed likely that music provided an imperative social tool throughout the history of human evolution, and represents just one of the many ways in which humans are "different" from other species.

*Original chapter written by Ian Cross, Professor of Music and Science at Cambridge University. Chapter published in "The Cultural Study of Music: A Critical Introduction", Routledge, 2003. Extracts used by kind permission of Ian Cross.*

*Featured image credit: Stone wall with ancient musicians, by Repina Valeriya © via Shutterstock.*

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