Can we envision an evolutionary scenario for the emergence and evolution of musical practices from direct archeological evidence and other cultural proxies?

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The origin and evolution of musical practices in humans represent a paradox that scientists struggle to understand and resolve. On the one hand, it is clear that the production of melodic, rhythmic sounds links humans to a large number of species and that there must therefore be a continuum between the sounds produced by these species, which we often perceive as harmonious and rhythmic, and the fact of being a species sensitive to these stimuli. There is therefore no reason why music and musical practices should not have arisen very early in the evolutionary history of our lineage, or at least from the preludes of our species. On the other hand, the archaeological evidence for the emergence of objects specifically designed to produce music is fairly recent, dating back to only around 40,000 years. It is reasonable to ask, however, whether the origin of musical practices coincides with the earliest archaeological evidence of such practices, or whether it largely preceded it. The second hypothesis seems by far the more likely, given that many of the musical instruments used by hunter-gatherers, particularly in mid latitudes, leave no trace of themselves in the archaeological record or would not be recognised as musical instruments by archaeologists. This observation should prompt us to approach the question of the origin and evolution of musical practices in a different way. We need to consider these practices as one aspect of a niche-construction process that produced distinct regional cultural trajectories, from at least 300,000 years ago, among Middle Stone Age populations in Africa and Neanderthal and Denisovan populations in Eurasia. Each of these trajectories may have given rise to different musical practices. Some may have disappeared along with the eco-cultural niches that produced them. By analysing the cultural innovations developed within these different cultural trajectories, and their possible evolution, we can generate predictions about the nature, complexity and evolution of musical practices between 300,000 and 40,000 years ago, and envision an evolutionary scenario for evolution of these practices covering the whole of the last 300,000 years, with the goal of understanding how we have moved from musical niches to musical self-domestication.