

## Tonal Pitch Structure as a Tool of Social Consolidation

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**Abstract :** Social consolidation has often been indicated as an adaptive function of music which led to the evolution of music faculty. According to many scholars this function is possible thanks to musical rhythm that enables sensorimotor synchronization to a musical beat. The ability to synchronize to music allows performing music collectively which enhances social cohesion. However, the collective performance of music consists also in spectral synchronization that depends on musical pitch structure. Similarly to rhythmic synchronization, spectral synchronization is a result of 'brain states alignment' between people who collectively listen to or perform music. In order to successfully synchronize pitches performers have to adequately expect the pitch structure. The most common form of music which predominates among all human societies is tonal music. In fact tonality understood in the broadest sense as such an organization of musical pitches in which some pitch is more important than others is the only kind of musical pitch structure that has been observed in all currently known musical cultures. The perception of such a musical pitch structure elicits specific emotional reactions which are often described as tensions and relaxations. These facts provoke some important questions. What is the evolutionary reason that people use pitch structure as a form of vocal communication? Why different pitch structures elicit different emotional states independent of extra-musical context? It is proposed in the current presentation that in the course of evolution pitch structure became a human specific tool of communication the function of which is to induce emotional states such as uncertainty and cohesion. By the means of eliciting these emotions during collective music performance people are able to unconsciously give cues concerning social acceptance. This is probably one of the reasons why in all cultures people collectively perform tonal music. It is also suggested that tonal pitch structure had been invented socially before it became an evolutionary innovation of Homo sapiens. It means that a predisposition to tonally organize pitches evolved by the means of 'Baldwin effect' - a process in which natural selection transforms the learned response of an organism into the instinctive response. The hypothetical evolutionary scenario of the emergence of tonal pitch structure will be proposed. In this scenario social forces such as a need for closer cooperation play the crucial role.

**Keywords :** emotion, evolution, tonality, social consolidation

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