Tone—the exaptation of music

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Tone is acknowledged as an important supersegmental aspect of phonology. It is distributed at a different tier from segmental tier (Goldsmith, 1976). Tone languages use tone (pitch) variation to distinguish meanings. In this paper, we hypothesize that tone is in effect an aspect of music faculty, and it is exapted from music to be a part of phonology of FLB (human language faculty in broad sense) (Hauser et al. 2002). We provide following empirical evidence to support our hypothesis: 1) pitch perception and production reflect the activation of right hemisphere of brain, like music does (Peretz & Zatorre, 2005); 2) native speakers of tone language perform as good as trained musicians of non-tone language in the pitch perception experiment (Bidelman, Hutka & Moreno, 2013); 3) L2 learners with better music ability can learn tone language better than those with ordinary or poor music ability (Perfors & ong, 2012); 4) some non-human animals are also sensitive to pitch classes (Samuels, 2009); 5) the proposal of music protolanguage presents an evolutionary evidence for our hypothesis (Fitch, 2010).

If our hypothesis is on the right track, it may provide insights to the ongoing studies on tones, and the irresolvable issues of which could be explored through close study on music. At the same time, it also frees the burden of the evolution of language faculty in terms of tones (FLB part), the likely "messy" aspect of phonology.

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