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The transfer effect from language to music: A study on Chinese and Vietnamese native speaker’s perceiving musical pitch

Abstract:

By investigating musical pitch processing in speakers of tone vs. non-tone languages is one way to look for “language-to-music” transfer effect (Slevc, 2012). While this study was not to compare tone language speakers with non-tone language speakers, but to compare language speakers of different numbers of tones. How speakers with different tone numbers process musical pitch is an integral part of looking for such transfer effect.

This experiment aims to investigate whether language would have a positive transfer effect to music by examining whether speakers of different numbers of tones have identical ability to perceive musical change.

This experiment recruited 13 Vietnamese native speakers and 13 Chinese Mandarin native speakers. The stimuli are note discrimination (pairs of notes), interval change (pairs of two-notes melody) and contour change (pairs of four-notes melody). The subjects listen to stimuli. They are asked to discriminate whether there is pitch change of what they heard (discrimination) or not and conduct “yes” or “no” task. This is a tonal group (Vietnamese, Chinese) * pitch discrimination (note, interval change, contour change) * distance level (>100cents, <100cents) design.

If linguistic tones have a positive transfer effect to music as previous studies showed (e.g, Deutsch 2006, 2009; Pfordresher & Brown, 2009; Hove, Sutherland & Krumhansl 2010; Bidelman, Hutka & Moreno 2013; Ngo et al. 2016), a more complicated tone language (Vietnamese in this study, which has six tones) should have a bigger effect on music than a less complicated tone language (Chinese in this study, which has four tones). That is, Vietnamese native speakers are expected to have more enhanced ability for music than Chinese mandarin speakers.