

## **Abstract**

Past studies have not yielded clear conclusion on the relationship between music and language perception. This study reopened the issue by investigating the interactions among AP level, RP level, language background, and Cantonese lexical tone discrimination. Two groups of participants, one of native speakers of tone languages and one of native speakers of atonal languages took part in AP, RP and Cantonese tone discrimination tests. Results revealed that neither AP nor RP levels predicted performance on Cantonese tone discrimination, suggesting that processing pitch in music is different from processing pitch in language. There are different cognitive modules for perception of language VS music stimuli. In Cantonese tone discrimination test, tonal group outperformed the atonal group. Performance of atonal group was divergent. These findings demonstrate that influence of tonal and atonal linguistic backgrounds on non-native tone perception is generally positive and variable respectively. Tonal abilities could be transferable. Lastly, against general findings, both groups showed comparable performance in AP and RP. This implied a substantial influence of test methodology on the results of AP and RP tests, and possibly an underestimation of AP prevalence based on the commonly adopted AP test in previous studies.