

Supplemental Material S2. Supplementary analyses on musicianship and English stress perception.

To examine whether and how Cantonese language experience influences the effect of musicianship on English stress discrimination, a two-way ANCOVA was conducted on d' with language (Cantonese and English) and musicianship (musician and nonmusician) as the between-subjects factors and nonverbal intelligence as the covariate. There were significant main effects of language, $F(1, 112) = 92.09, p < .001, \eta_p^2 = .45$, and musicianship, $F(1, 112) = 4.46, p = .037, \eta_p^2 = .04$. The interaction between language and musicianship was also significant, $F(1, 112) = 6.02, p = .016, \eta_p^2 = .05$. Simple effects analysis was conducted to unpack the interaction. Among the English listeners, the musicians outperformed the nonmusicians, $p = .002$. Among the Cantonese listeners, the musicians performed similarly as the nonmusicians, $p = .817$. Collectively, musicianship facilitates English stress discrimination among the English but not the Cantonese listeners.

Regarding response time, a two-way ANCOVA was conducted with language (Cantonese and English) and musicianship (musician and non-musician) as the between-subjects factors and nonverbal intelligence as the covariate. The main effect of language, $p = .881$, and the interaction between language and music, $p = .845$, were not significant. However, the main effect of musicianship was marginally significant, $F(1, 112) = 3.79, p = .054, \eta_p^2 = .03$. In essence, the musicians tended to respond faster than the nonmusicians.

To examine whether and how Cantonese language experience influences the effect of musicianship on English stress sequence recall, a two-way ANCOVA was conducted on accuracy with language (Cantonese and English) and musicianship (musician and nonmusician) as the between-subjects factors and nonverbal intelligence as the covariate. There were significant main effects of language, $F(1, 112) = 17.07, p < .001, \eta_p^2 = .13$, and musicianship, $F(1, 112) = 10.91, p = .001, \eta_p^2 = .09$. The interaction between language and musicianship was also significant, $F(1, 112) = 5.64, p = .019, \eta_p^2 = .05$. Simple effects analysis was conducted to unpack the interaction. Among the English listeners, the musicians outperformed the nonmusicians, $p < .001$. Among the Cantonese listeners, the musicians performed similarly as the nonmusicians, $p = .496$. Collectively, musicianship facilitates English stress sequence recall among the English but not the Cantonese listeners. The same set of analysis was conducted on consonant sequence recall accuracy. The main effects of musicianship, $p = .110$, and language, $p = .667$, were not significant, nor was their interaction, $p = .225$.

A two-way ANCOVA was conducted on d' with musical ability (high and low) and language (Cantonese and English) as the between-subjects factors and nonverbal intelligence as the covariate. There were significant main effects of musical ability, $F(1, 39) = 13.08, p = .001, \eta_p^2 = .25$, and language, $F(1, 39) = 43.29, p < .001, \eta_p^2 = .53$. The interaction between musical ability and language was not significant, $p = .661$. For both Cantonese and English listeners, high musical ability facilitated English stress discrimination. The same set of ANCOVA was conducted on response time. The main effects of musical ability, $p = .146$, and language, $p = .723$, were not significant, nor was their interaction, $p = .598$. As such, the above finding was not due to speed-accuracy trade-off.

A two-way ANCOVA was conducted on sequence recall accuracy with musical ability (high and low) and language (Cantonese and English) as the between-subjects factors, and nonverbal intelligence as a covariate. There were significant main effects of musical ability, $F(1, 39) = 15.20, p < .001, \eta_p^2 = .28$, and language, $F(1, 39) = 7.54, p = .009, \eta_p^2 = .16$. The interaction between musical ability and language was not significant, $p = .368$. For both Cantonese and English listeners, high musical ability facilitated English stress sequence recall.