
Mandarin third tone sandhi may be incompletely neutralizing in perception as well as production

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Conflict of interest statement

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest

Author contribution statement

SP and YH conceived the experiment. SP, KC, LP and YH designed the experiment. KC and LP created the stimuli. KC programmed the experiment and LP collected the data. SP and KC analyzed the data. All authors wrote and approved the manuscript.

Keywords

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Abstract

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Mandarin third tone sandhi is traditionally assumed to be incompletely neutralizing in production but completely neutralizing in perception, based on metalinguistic judgment tasks in which participants cannot reliably identify the underlying tone of syllables neutralized by tone sandhi. We performed a visual world eye-tracking study to see if implicit sensitivity to the differences between the surface forms influences participants' eye movement patterns, even if they cannot consciously access this for identification tasks. We found a slight trend in this direction, with participants looking more towards orthographic representations that match the underlying form of the neutralized syllable they hear. The results are statistically inconclusive but suggest that this paradigm may be able to provide evidence that Mandarin neutralized tones are indeed incompletely neutralized, and that further research along these lines is warranted.

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