How does L2 learners' prosody perception affect their listening fluency?

Zezhou Xing, Sasha Calhoun
Te Herenga Waka – Victoria University of Wellington, New Zealand

Prosody, a pivotal element in spoken language [1], is well-recognised to play a significant role in second language (L2) fluency, including in listening [2]. Prosodic cues are important to many aspects of speech comprehension in L1 and L2, including word recognition, syntactic parsing, discourse tracking and pragmatics [3]. Consistent with this, there is mounting evidence that training L2 learners' awareness of prosodic cues can improve their listening performance [4-7]. Most of these studies focused on advanced L2 learners' listening performance. Much less is known about how prosodic awareness affects low-intermediate level L2 learners' listening, an important gap as prosody training is often targeted at more advanced learners. We take a different approach, looking at the relationship between L2 learners' existing understanding of prosodic cues and their listening fluency. Among prosodic features, phrasing, pitch accenting and the intonational tune have important, well-known communicative functions, in indicating syntactic structure, new/focused information, and pragmatic force respectively [8-10]. We explore whether L2 learners' perception of these three prosodic cues affects their listening comprehension, a key part of fluency.

Forty-two first-year undergraduates in China with L1 Mandarin who are low-intermediate proficiency English learners took part. They completed three perception tasks, used in previous research, measuring understanding of key functions of prosodic phrasing [11], pitch accenting [12], and intonation tunes [13]; as well as a listening comprehension test [14] and a C-test [15] to test general English proficiency. In the prosodic phrasing task, participants heard sentences with ambiguous prepositional phrase attachment, e.g., '*Put the dog on the mat in the basket*', and had to choose one of two pictures matching what they heard. In the pitch accent task, participants heard a question, e.g. '*Who closed the window?*', then an answer which was appropriate given the question '*The *customer closed the window*' ('*' stands for pitch accent) or not '*The customer closed the *window*', and had to rate how appropriate the answer was. In the intonation tune task, participants listened to a story, in which there were 15 test sentences with different types including tag questions, statement and echo, read with tunes. They needed to select the most appropriate tune for each sentence.

A linear regression model was built to predict how understanding of the three prosodic features (in the phrasing, accenting and tune tasks) affected listening comprehension performance. Scores were derived for each task and the C-test, which were scaled. The model showed pitch accenting scores significantly improved the model ($F(1, 25.7) = 4.95$, $p = 0.032$), and phrasing marginally significantly ($F(1, 20.2) = 3.90$, $p = 0.056$), but not tune ($p=0.21$); see Figure 1. There was no effect of C-test score ($p=0.12$), and no correlation between C-test and perception task scores, showing better perception of prosodic cues was not a general effect of proficiency. A VIF test showed no multicollinearity in the model.

The results showed that L2 learners' awareness of pitch accenting cues, and weakly prosodic phrasing, are predictors of their listening comprehension at the low-intermediate proficiency level. Even at this level, being able to use pitch accenting to identify new/focal information assists learners to understand and remember heard information, and correctly answer comprehension questions. The ability to use prosodic phrasing to parse syntactic structure had only a weakly facilitative effect, possibly because prosodic phrasing is more similar across languages [16], so L1 transfer is fairly effective even for low proficiency learners. Listeners' sensitivity to the intonational tune did not significantly affect their listening comprehension. This pragmatic information may not be sufficiently informative at this level, or learners cannot make use of it. This study has shown that being able to use prosodic cues is important to listening and fluency even for lower proficiency learners, suggesting this group would benefit from prosody training, especially about pitch accenting.

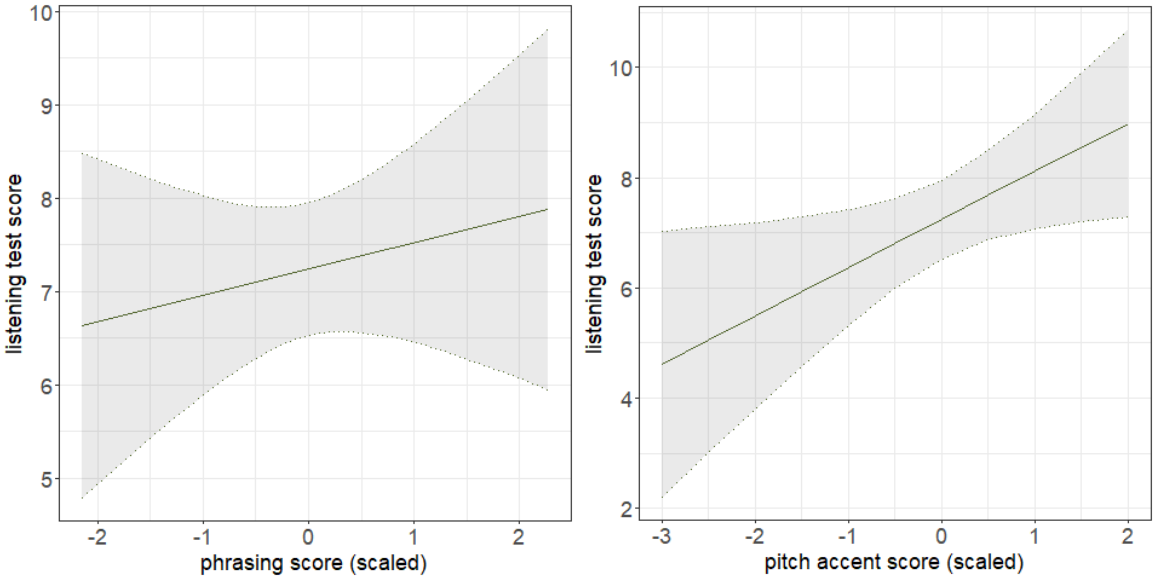

Figure 1: The model estimates of the contribution of phrasing (left) and pitch accenting (right) to listening comprehension test scores.

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