Perception of Spanish Accent Position in Rising Intonation by Japanese Learners

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Despite the fact that the Spanish and Japanese languages share a number of phonological characteristics, the accent is defined in very different ways in each of them. Whereas the Spanish accent is very closely linked to a rise in tone, albeit not necessarily within the boundaries of the stressed syllable (Quilis, 1981; Hualde, 2005), the accent in Japanese is marked by a decrease in tone following the stressed syllable (Saito, 2006; Vance, 2008). This causes that, on some Spanish utterances, Japanese learners fail to recognize the correct position of the stress.

By means of a perceptual experiment, we studied the influence of sentence intonation on correct recognition of accent position in different Spanish utterances by both native speakers and Japanese learners. In order to do this, we selected three Spanish words and three nonce words that differed only on the position of the stress (e.g. número – numero – numeró; núlido – nulido - nulidó), and placed them in six different contexts: 1. in isolation (Isol), 2. at the end of an affirmative sentence (Aff-fin), 3. in the middle of an affirmative sentence (Aff-nonfin), 4. in the middle of a negative sentence (Neg-nonfin), 5. at the end of a Yes/No question (Q-fin) and 6. in the middle of a Yes-No question (Q-nonfin).

A total of 51 Japanese university students majoring in Spanish participated in the experiment.

The results showed that the performance of the Japanese learners was on par with that from the native speakers in falling intonation contexts, but decreased significantly in rising intonation contexts, especially when the target word was at the end of an interrogative sentence (Q-fin). See Figure 1. This supports the idea that sentence intonation has an important influence on Japanese learner's perception of Spanish stress, particularly so with rising intonations, which correlates well with the aforementioned differences between Spanish and Japanese accents. A declining intonation reduces the amount of noise in the perception of the target word’s pitch contour, and makes it much more likely for Japanese learners to identify a rise in pitch as a telling sign that a syllable is stressed. On the other hand, when the target word is placed in a rising pitch, Japanese learners find it hard to differentiate information pertaining to the interrogation toneme from that related to the syllable’s stress. See Figure 2.
Figures

Figure 1: Japanese subjects who answered correctly per context.

\[\text{Mean} \pm SD; \quad N=51\]

Figure 2: Syllables perceived as stressed for all kinds of target words in Q-fin context for both groups of subjects.

References


