Different patterns of variation in segmental duration (§ 2.1)

(1) Different Word Prosody

Effect of vowel duration covariation?

"...to be clearer in Finnish than in Japanese" (p. 42; Fig. 1)

1.2. A cross-language study reveals no clear difference

Q2: If language-specific knowledge affect quantity categorization, how?

1. Research Questions

(1) Finnish: Conditioned by word-initial syllable structure

(2) Japanese: Conditioned by mora counts

(3) Two types of (CVC)

3. Participants & procedure

- Forced choice between the single / geminate consonant minimal pairs

- Repeated in - (target on 4th mora)

- (target on 3rd mora)

Figure 1: Schematic of the moraic structure of the three real pairs. (FIN talker) and (FIN talker) and (JPN talker)

6.1. Relevance of moraic structure for quantity in Finnish

- The initial two moras have been argued to be the the segmental domain of durational realization of stress and F0 realization of accent (Suomi, 2003: 304, Fig. 7).

The consonant in the initial position of the second bi-moraic unit has to be acoustically longer to be perceived as geminate? (Fig. 6)

should be longer to be identified as geminate?

5. Results (Finnish Listeners only)

(1) Easier to identify single / geminate consonant than Japanese

(2) Easier to identify Japanese / geminate consonant than Japanese

(3) Residual acoustic cues of /pp/ enhance /pp/ identification for means in vowel context

(4) /pp/ identification is later (target on 4th mora) vs. when the word-initial syllable is CVC (vs. mora > mean)

AND the target consonant is on the 3rd mora (vs. mora > mean)

(5) Effects of duration are not observed for Japanese listeners

5.6. Discussion & Conclusions

(1) Geminate identification is later (silent) and longer in Japanese

(2) Geminate identification is later than long vowel

Consonants should acoustically be longer to be identified as geminate at the position of the second bi-moraic unit

- The effect of difference in duration of the preceding vowel or vowel ("contour" effect) in Kingston, et al., (2009)

- Language-specific knowledge on moraic structure is relevant

(2) The same effect was not observed for Japanese listeners

- "Quantity languages" may differ in quantity categorization

- Japanese talker only

The stimuli created from the original token with /pp/ tend to be

- Forced choice between the single / geminate consonant minimal pairs

- Repeated in - (target on 4th mora)

- (target on 3rd mora)

4.4. Residual acoustic cues to identify Japanese

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