

THE PHONETICS OF EMPHATIC VOWEL LENGTHENING IN ENGLISH

Natalie Drescher, Sarah Korostoff, Melanie Pangillinan, Jessica Trombetta, and Professor Shigeto Kawahara
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INTRODUCTION & BACKGROUND

This project is a study of vowel lengthening due to emphasis in English. English does not make use of a pure duration-based length distinction to make lexical contrasts, unlike some other languages. However, we do observe cases in which speakers make use of durational differences to convey emphasis.

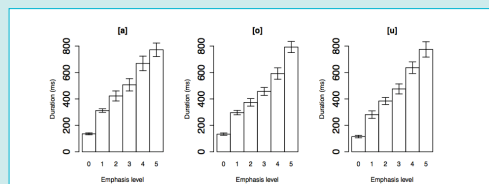
Ex: That model is **very** tall vs. That model is **veeeery** tall.

Kawahara and Braver (2013) have shown in their experimental work that in Japanese casual speech, some speakers can make up to 6-level durational distinctions for emphasis.

Their sample stimuli:

Japanese orthography	Transcription	Condition	Gloss
a. いたい	[itai]	no emphasis	'painful'
b. いたーい	[itaaɪ]	level 1 emphasis	'painful' (emphatic)
c. いたーーい	[itaaaɪ]	level 2 emphasis	'painful' (very emphatic)
d. いたーーーい	[itaaaaɪ]	level 3 emphasis	'painful' (very very emphatic)
e. いたーーーーい	[itaaaaaɪ]	level 4 emphasis	'painful' (very * 3 emphatic)
f. いたーーーーーい	[itaaaaaaɪ]	level 5 emphasis	'painful' (very * 4 emphatic)

A sample result from Kawahara and Braver (2013):



Question: Can English speakers produce a lengthening distinction similar to that of Japanese?

EXPERIMENT

The stimuli consisted of 7 target words placed in carrier sentences:

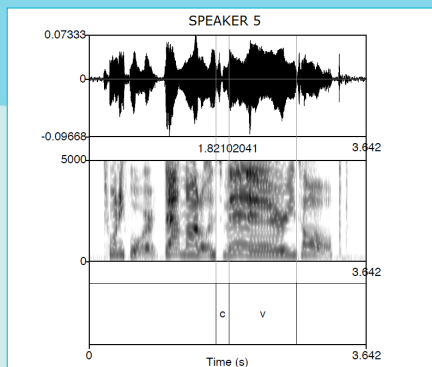
1. That bag is **mad** expensive.
2. That model is **very** tall.
3. That baby is **too** cute.
4. That guy is **so** creepy.
5. That band is **way** cool.
6. That joke is **super** funny.
7. That lecture was **really** boring.

For each sentence, there were 5 different degrees of emphasis and one no emphasis condition:

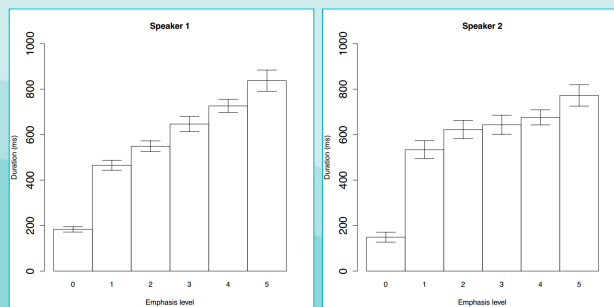
so, soo, sooo, soooo, sooooo, soooooo

The stimuli were pronounced by 8 native English female speakers who repeated each phrase in a randomized order. Each sentence was pronounced 10 times in a sound-proof booth.

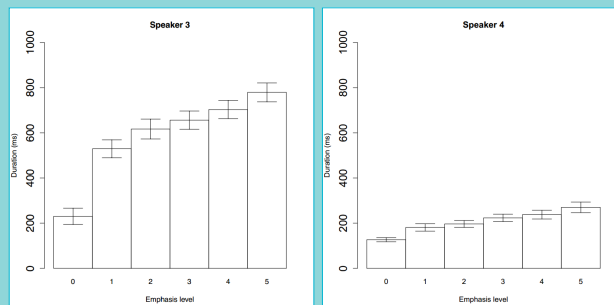
RESULTS & DISCUSSION



Duration measurement procedure: A sample of the target word 'very' during acoustic analysis.

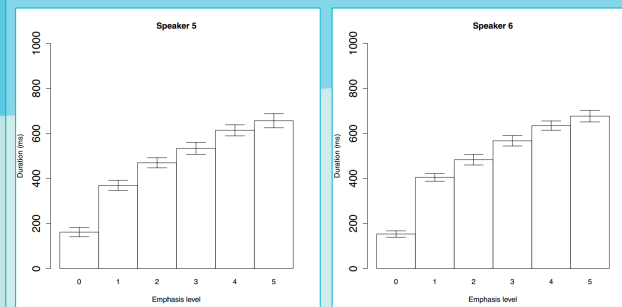


Speaker 1 had a clear distinction for each level. For Speaker 2, there was a large jump from level 0 to level 1 and from level 1 to level 2, also from level 4 to level 5. Yet the jump from level 2 to level 4 was rather small.

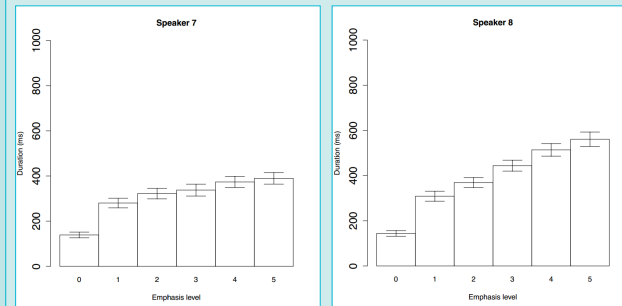


Speaker 3 had a similar pattern to Speaker 2. For speaker 4, the differences were not as clear and the duration range was much shorter. Nevertheless, the speaker was making reliable differences between each level—error bars are small.

RESULTS & DISCUSSION CONTINUED



Speakers 5 & 6 made a distinction between every level. As with other speakers, the jump from level 0 to level 1 is more substantial than other differences.



In Speaker 7, the jumps are small and only makes a reliable distinction from level 0 to level 1 and from level 1 to level 2; distinctions from level 2 to level 5 were not very clear. Speaker 8 makes a clear distinction on all levels.

CONCLUSION & FURTHER RESEARCH

At least some English speakers (Speakers 1, 5, 6, 8) make 6-level durational distinctions to express different degrees of emphasis, just like some speakers recorded in Kawahara and Braver (2013).

This result is surprising because English does not make a pure duration-based lexical contrast.

For all speakers, the jump from level 0 (no-emphasis) to level 1 is usually more substantial than differences among emphatic levels.

Remaining questions:

1. Is 6 levels the maximum?
2. Can languages other than English and Japanese produce such fine-grained distinctions?
3. Can English speakers perceive these different levels of emphasis?

REFERENCES/ACKNOWLEDGEMENT

Kawahara, Shigeto and Aaron Braver (2013). The phonetics of emphatic vowel lengthening in Japanese. *Open Journal of Modern Linguistics* 3(2).

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