

## Supplementary material 4

### Duration of morae which bear BPMs in Sec. IV C

If the slower speech rate in IDS is what causes IDS pitch range expansion, then we would expect IDS utterances as a whole to have larger pitch ranges than ADS, which was not borne out. It is possible, however, that IDS morae with BPM were longer than those in ADS, which would result in the pitch range expansion in BPMs in IDS. To test this possibility, we measured the duration of morae which bear each BPM type in IDS and ADS, and found that mora durations in none of the BPM types were longer in IDS than ADS. The results are summarized in the table below. This confirms that the pitch range at a BPM is larger in IDS independent of the speaking rate.

Table 1. Duration in milliseconds of morae which bear BPMs and the results of paired *t*-tests. Standard deviations are in parentheses.

	ADS		IDS		<i>t</i> (20)
H%	266.47	(60.54)	203.75	(28.12)	4.60***
LH%	274.68	(74.03)	258.77	(49.88)	1.03
HL%	347.11	(4.09)	353.64	(95.56)	-0.30

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**Note:** This is a supplemental material to the following paper. Please refer to it when referring to the information contained in this Supplemental Material.

Igarashi, Y., Nishikawa, K., Tanaka, K., & Mazuka, R. (2013). Phonological theory informs the analysis of intonational exaggeration in Japanese infant-directed speech. *The Journal of Acoustical Society of America*, 134(2), 1283-1294.

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