Supplementary data 1: Density plots for each corpus, collapsing over pair

Fig. S1 shows density plots and histograms for each corpus, comparing phonologically short and long vowels in each mnother's corpus, collapsing over vowel pairs. The Dutch dataset is not distinguished from the English by greater separation in the distribution of vowel durations.

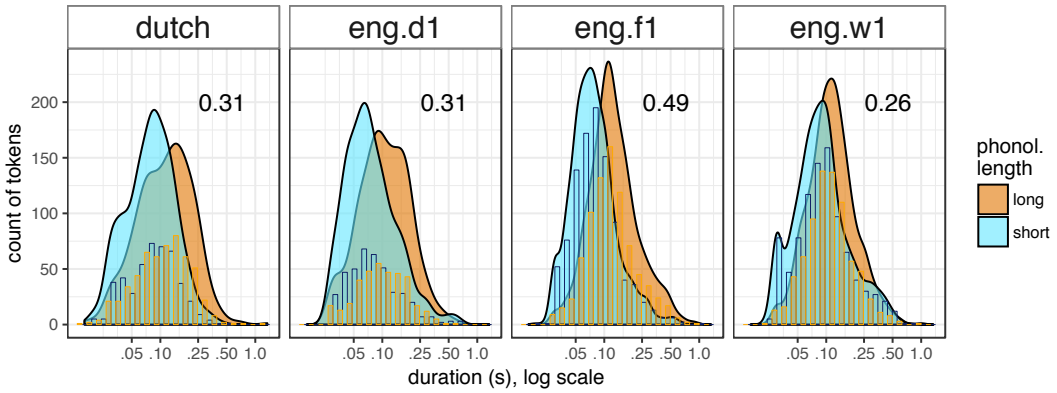


Figure S1. Duration distributions for each corpus, collapsing over vowel pairs

Supplementary data 2: Density plots showing utterance-position regression results

Fig. S2 represents residuals of a regression of duration against utterance position, in effect attempting to place utterance-final and non-utterance-final vowels on equal footing in terms of duration. The analysis shows that Dutch vowels are not especially distinctive by duration, just as they weren't in the regression of raw (log) durations.

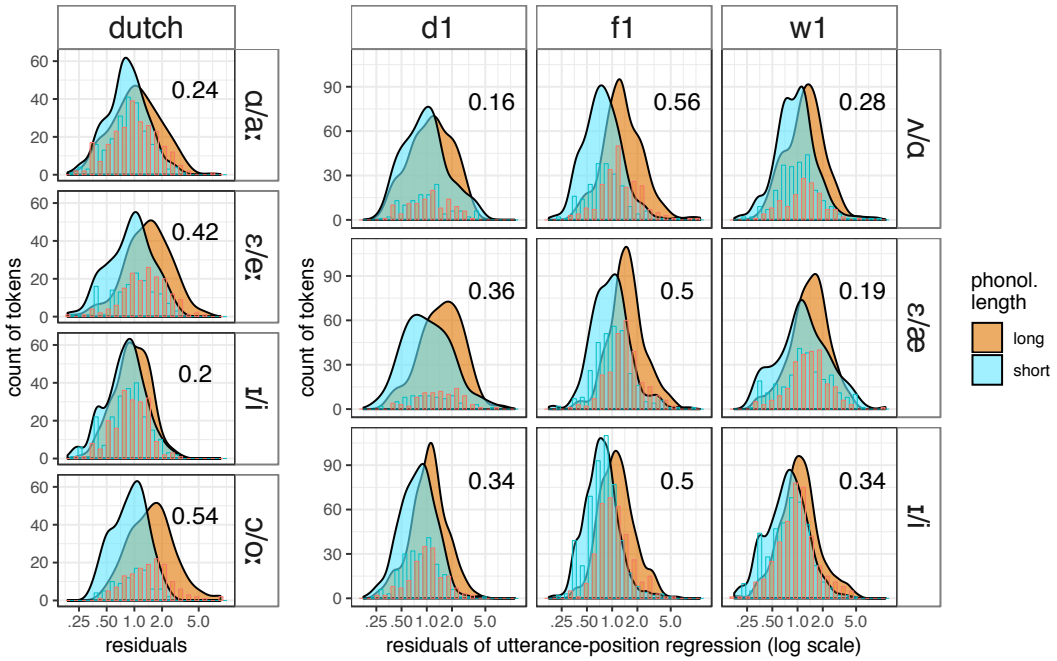


Figure S2. Duration distributions as residuals from regression including utterance position

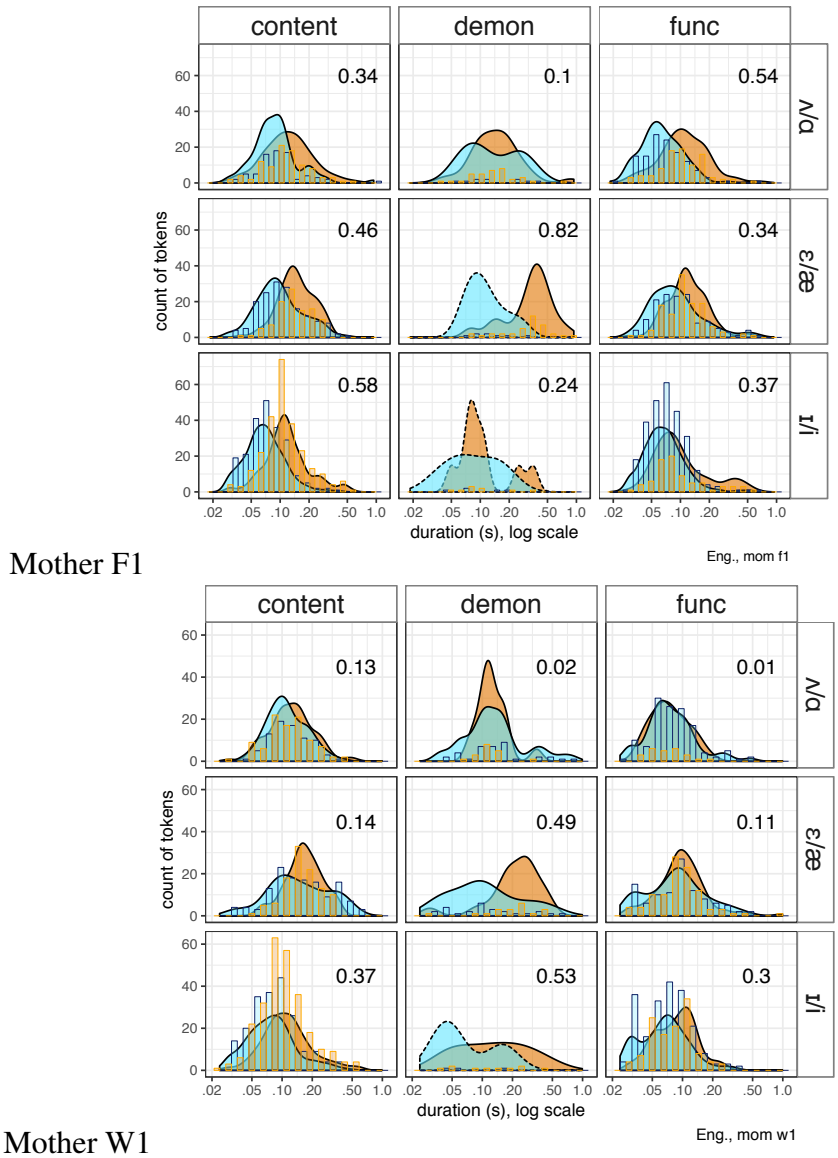
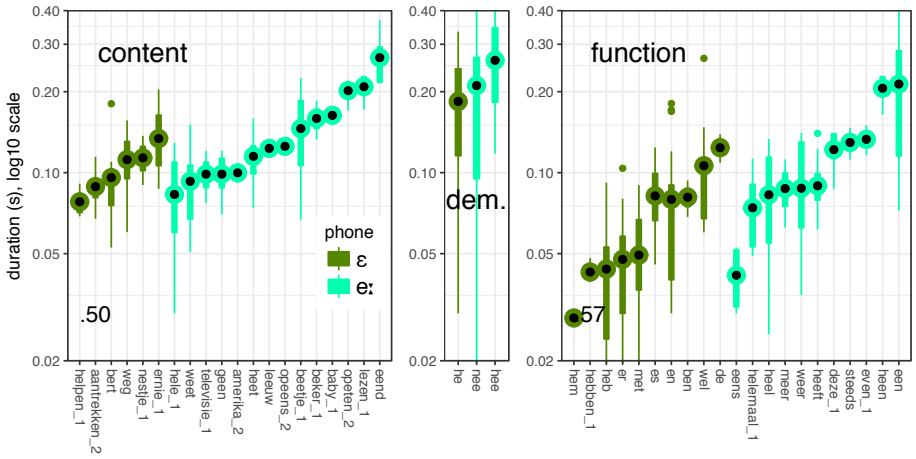


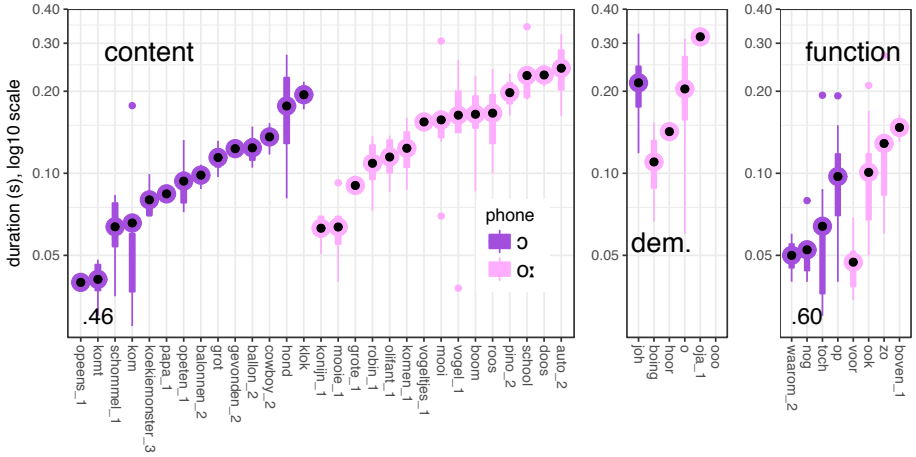
Figure S3. Vowels' duration distributions by pair, split according to word type (content word, demonstrative, function word). Curves representing fewer than 10 tokens are bounded with dotted lines. Numbers in the plot fields are rank-biserial correlations; higher numbers indicate greater separation among nominally short and long vowel categories. Data are from English mothers F1 and W1.

Supplementary data 3: Duration distributions by word type, for English moms F1 and W1

The plots in Fig. S3 are analogous to the duration distributions provided in the main text for the Dutch analysis and Engish mother D1.



(a) Dutch E/e

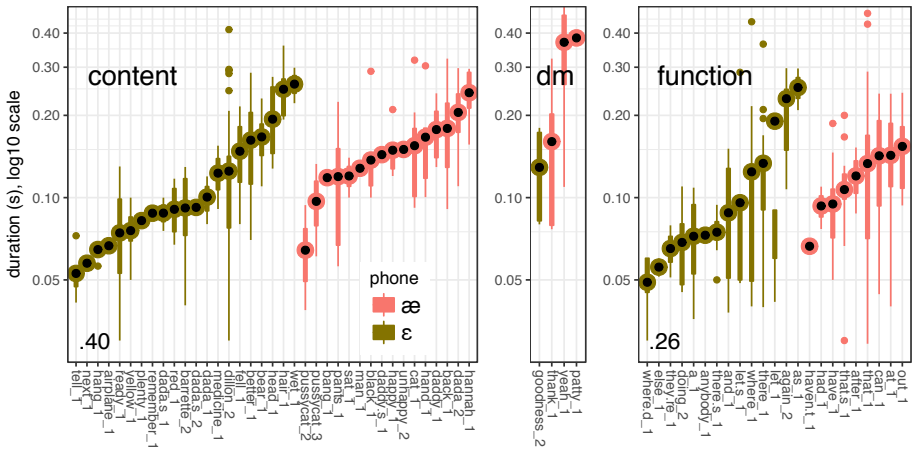


(b) Dutch c/o

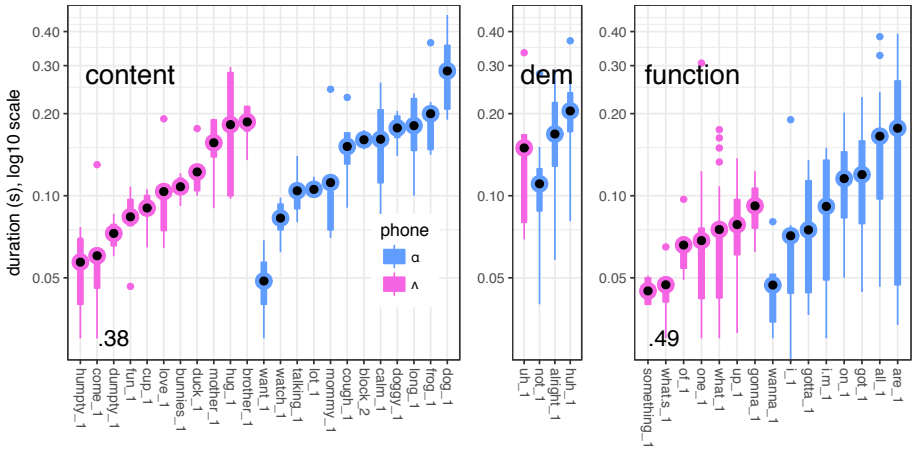
Figure S4. Dutch dataset, /ɛ,eː/ and /ɔ,oː/ pairs shown according to word type.

Supplementary analysis 4: Word by word results for every vowel pair in both languages

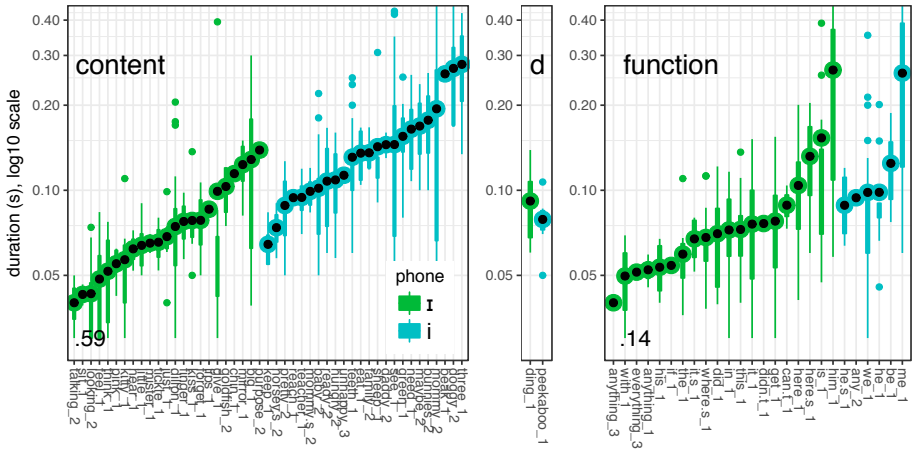
This series of plots shows the word-by-word distribution of durations for nominally short and long vowels in each corpus, split by vowel pair and word type. Each word's mean duration (plot circle) and interquartile range (boxplot) are given, for words with a frequency of at least 2 in the corpus. Word type is designated on the x axis, where _1 or _2 (etc.) indicates the syllable in which the vowel is found.



(a) Eng. F1 /ɛ,æ/

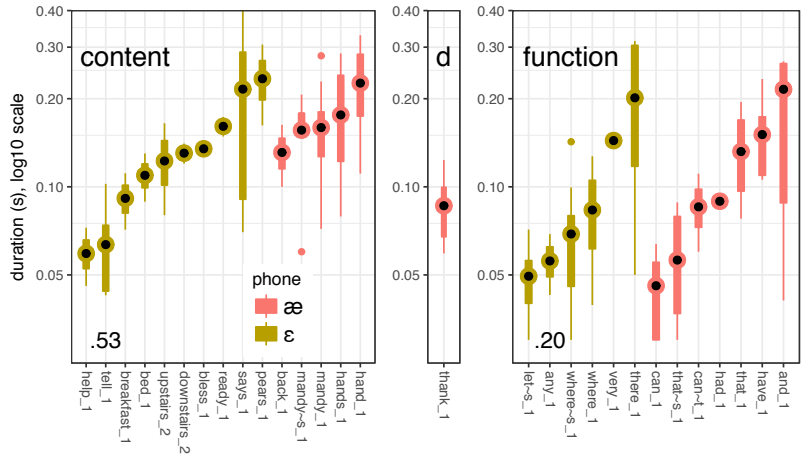


(b) Eng. F1 /ʌ,a/

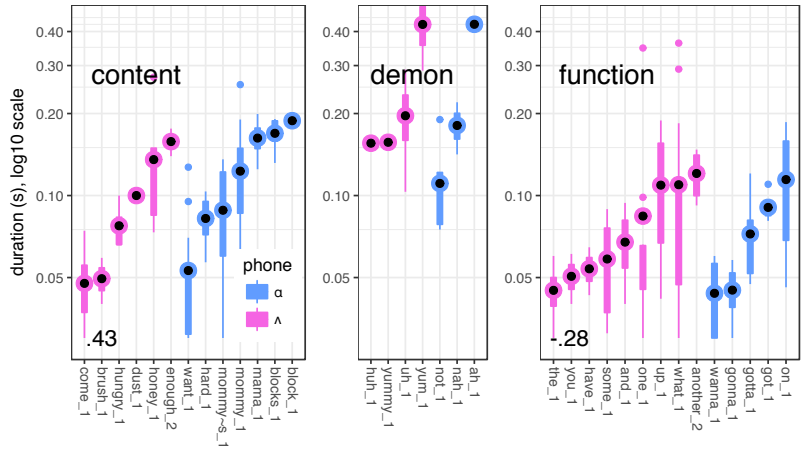


(c) Eng. F1 /ɪ,i/

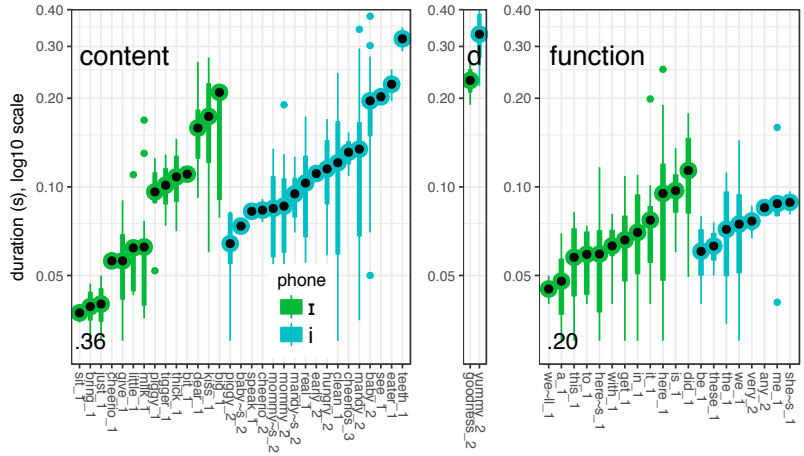
Figure S5. English mom F1 dataset, all pairs shown according to word type.



(a) Eng. D1 /ɛ,æ/

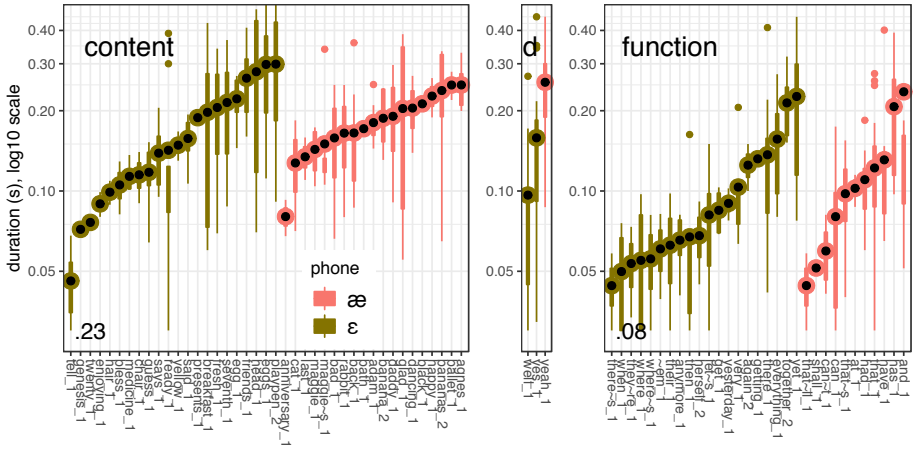


(b) Eng. D1 /ʌ,a/

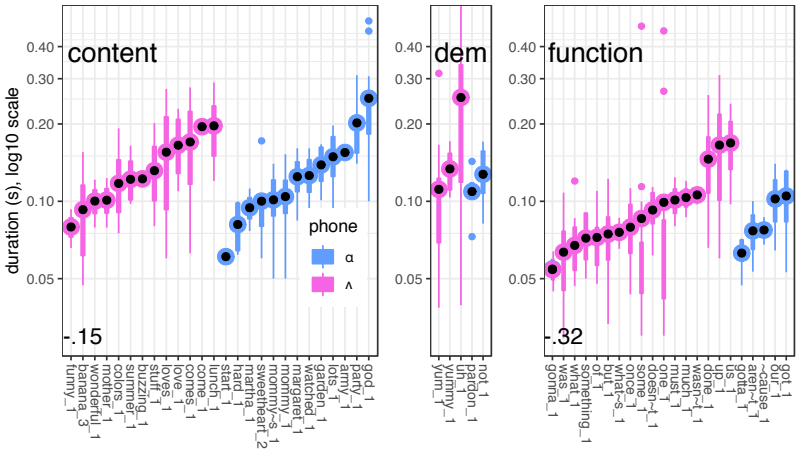


(c) Eng. D1 /ɪ,i/

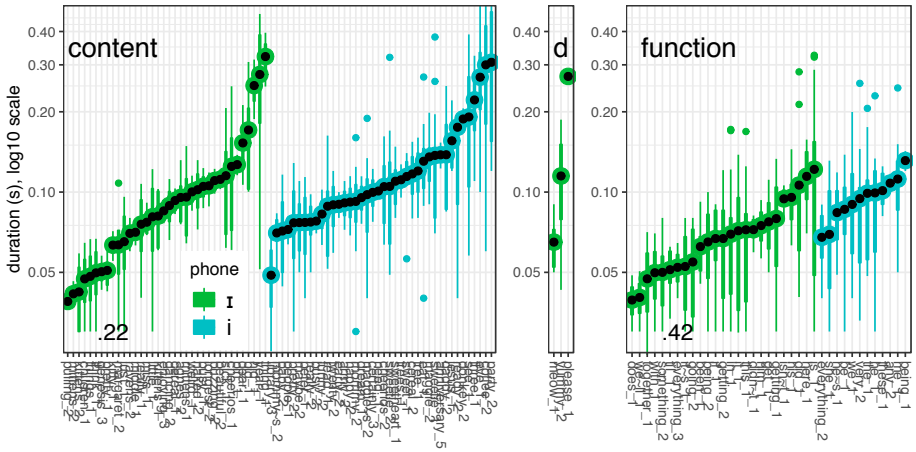
Figure S6. English mom D1 dataset, all pairs shown according to word type.



(a) Eng. W1 /ɛ,æ/



(b) Eng. W1/ʌ,a/



(c) Eng. W1 /ɪ,i/

Figure S7. English mom W1 dataset, all pairs shown according to word type.