

Mandatory dichotic integration of second-formant information: Contralateral sine bleats have predictable effects on consonant place judgments

Datasets

These datasets comprise listeners' judgments of place of articulation for the approximant-vowel speech analogues and sine bleats used in the experiments described in the article of the same title (Roberts, Summers, and Bailey, 2021; Journal of the Acoustical Society of America). There are four spreadsheets in total, two for experiment 1 and one each for experiments 2 and 3. Each spreadsheet comprises one worksheet containing relevant demographic information, one or more summary worksheets, and individual worksheets for each listener. Each summary worksheet contains aggregated responses and computed measures for each series and condition (for details, see below). Subsequent worksheets comprise the raw data for each listener and stimulus in each condition.

Experiment 1: Initial categorization of diotically presented CV syllables (no accompanying F2 sine bleats)

The worksheet named "Summary" contains the computed centroids and areas under each identification function ([w], [l], and [y] responses) for each series (WaLaYa and WiLiYi) for each listener, and the overall mean values (with inter-subject standard errors). The worksheet named "ALL" contains the responses aggregated across ten repetitions and across listeners for the WaLaYa series (Columns A-G) and the WiLiYi series (Columns I-O). The overall proportions of responses to each stimulus (1-11) in each series (with inter-subject standard errors) are summarized at the bottom of this spreadsheet.

The raw data in the subsequent worksheets comprise: (a) stimulus set (always WaLaYa in this case), (b) listener's response ([w], [l], or [y]), (c) response=[w] (1=Yes, 0=No), (d) response=[l], (e) response=[y], (f) total [w] responses (out of 10), (g) total [l] responses, (h) = total [y] responses, (j) stimulus set (always WiLiYi in this case), (k) listener's response ([w], [l], or [y]), (l) response=[w] (1=Yes, 0=No), (m) response=[l], (n) response=[y], (o) total [w] responses (out of 10), (p) total [l] responses, (q) = total [y] responses.

Experiment 1: Categorization of CV syllables presented dichotically, accompanied by matched or mismatched contralateral F2 sine bleats (tonal analogues, T2)

There are five summary worksheets for this experiment. The first contains the mean proportions of responses in each category ([w], [l], and [y]) to each stimulus (1-11) in each series and condition (with inter-subject standard errors). The others contain the computed centroids and areas under each identification function ([w], [l], and [y] responses) for each series (WaLaYa and WiLiYi) for each listener in each condition (with means and standard errors); changes in centroid and area for C2, C3, and C4 relative to C1 are also reported.

The raw data in the subsequent worksheets comprise: (a) condition number (C1-C4), (b) condition name (Matched, FixedStep1 or 6 or 11), (c) stimulus set (always WaLaYa in this case), (d) series step (1-11), (e) proportion of [w] responses (mean over 10 repetitions), (f) proportion of [l] responses, (g) proportion of [y] responses, (k) condition number (C1-C4), (l) condition name (Matched, FixedStep1 or 6 or 11), (m) stimulus set (always WiLiYi in this case), (n) series step (1-11), (o) proportion of [w] responses (mean over 10 repetitions), (p) proportion of [l] responses, (q) proportion of [y] responses.

Experiment 2: Categorization of CV syllables presented either monaurally or accompanied by matched contralateral F2 sine bleats

There are five summary worksheets for this experiment. The first contains the mean proportions of responses in each category ([w], [l], and [y]) to each stimulus (1-11) in each series and condition (with inter-subject standard errors). The others contain the computed centroids and areas under each identification function ([w], [l], and [y] responses) for each series (WaLaYa and WiLiYi) for each listener in the two conditions (with means and standard errors); changes in centroid and area for C2 relative to C1 are also reported.

The raw data in the subsequent worksheets comprise: (a) condition number (C1 or C2), (b) condition name (Monaural or MonauralPlusT2), (c) stimulus set (always WaLaYa in this case), (d) series step (1-11), (e) proportion of [w] responses (mean over 10 repetitions), (f) proportion of [l] responses, (g) proportion of [y] responses, (k) condition number (C1 or C2), (l) condition name (Monaural or MonauralPlusT2), (m) stimulus set (always WiLiYi in this case), (n) series step (1-11), (o) proportion of [w] responses (mean over 10 repetitions), (p) proportion of [l] responses, (q) proportion of [y] responses.

Experiment 3: Categorization of CV syllables and isolated F2 sine bleats presented diotically

There is a single summary worksheet for this experiment containing the aggregated number and proportion of responses ([w], [l], and [y]) for each listener for each part of the experiment, in which the listeners categorized the complete set of 11 syllables from one series interspersed with isolated sine bleats (steps 1, 6, and 11) from the other series.

The raw data in the subsequent worksheets comprise:

Block A (WaLaYa syllable/WiLiYi Bleat): (a) stimulus presented (Syllable or Bleat), (b) series step (1-11), (c) number of [w] responses, (d), number of [l] responses, (e) number of [y] responses.

Block B (WiLiYi syllable/WaLaYa Bleat): (h) stimulus presented (Syllable or Bleat), (i) series step (1-11), (j) number of [w] responses, (k), number of [l] responses, (l) number of [y] responses.