

Vowel space changes associated with auditory perturbations to multiple vowels

K. Reilly, D. Jenson

The present study evaluated vowel space changes in response to auditory perturbations of multiple vowel targets. During this study, speakers produced consonant-vowel-consonant words containing six 'back' and 'middle' vowels. Auditory perturbations of vowel F1 were applied to all six vowels in one group of speakers and to only two of the six vowels in a second group of speakers. Productions of the remaining four vowels in this latter group was not perturbed throughout the experiment. Analyses examine whether vowel responses to auditory perturbation are modulated by simultaneous perturbation of neighboring vowels. Analyses also addressed whether production of non-perturbed vowels is affected by the perturbation of a neighboring vowel. Preliminary results indicate that production of a perturbed vowel is amplified by the perturbation of a neighboring vowel suggesting that targets for any one vowel are partly dependent on the locations of neighboring vowels.