

A number of studies have investigated whether decisions about the place and voicing features of a segment are made independently, with contradictory results across studies. To investigate the independence question, this study replicated an experiment reported by Massaro and Oden, which manipulated voice onset time (VOT) and second and third formant (F2 - F3) transitions as voicing and place cues in consonant-vowel syllables. Members of a family of General Processing Tree (GPT) models were then fitted to the data to investigate how listeners made their voicing and place decisions. The modeling results suggested that listeners used both acoustic properties, VOT and F2- F3 transitions, as sources of information for both the voicing and the place decisions. The decisions, however, were found to be independent.