

BEHAVIORAL STUDIES OF THE PERCEPTION OF NON-NATIVE SPEECH SOUNDS

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Second-language learners are often presented with the challenge of distinguishing sounds in their target language that are not found in their native language. In what ways is the perception of these unfamiliar sounds shaped by the articulation of the sounds of one's own language? This study attempts to discover the root of phonetic assimilation by recording English speakers' reactions to unfamiliar phonemes in Zulu. Specifically, we are testing both the Perceptual Assimilation Model (PAM), which predicts the pattern of responses that non-native listeners will give to unfamiliar sounds and the Articulatory Organ Hypothesis, which predicts that listeners' preferred perceptual assimilations for non-native sounds will be native sounds that are produced by the same articulatory organ. Two initial studies were conducted at Wellesley College in conjunction with Haskins Laboratories in New Haven, CT. In these, participants were asked to match one of two English consonant-vowel syllables as a "better fit" to one of four Zulu stimuli: ɓu, k'a, ɬe, and ɬe. The initial experiments provided some weak support for the Articulatory Organ Hypothesis, but there were also suggestions in the data that our response measure was perhaps not sensitive enough. To get a more sensitive response, we decided to record subjects' reaction times. We conducted a third trial this summer comparing Zulu and English consonant-vowel syllables in an XA format, in which participants were asked to make judgments about whether the sounds they heard were the same consonants, or two different phonemes. The reaction times for each response were recorded and analyzed to determine if a same-organ assimilation preference was apparent.

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