Telling the Difference: Understanding the Difficulties of Perceiving New Languages

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The study of linguistics, specifically that of perception and production of non-native languages, helps researchers better understand language learning mechanisms. By utilizing uncommonly spoken languages, such as Slavic languages, we can learn how people differentiate similar sounds they are unfamiliar with, which in turn allows researchers to better understand how difficult it is for individuals to learn specific aspects of languages. In this study, I hypothesized that aspects of consonant construction (namely sound localization and consonant types) affect the perception accuracy of participants when they differentiate between some consonant-consonant beginning words versus consonant-vowel-consonant words. I also predicted that response biases in the experiment affect perceptual accuracy. I created a digital experiment that tasked volunteers with differentiating between similar sounding non-native sounds by hearing one version of each sound, and later matching a third sound with one of the first two. I found that consonant clusters that had the place of articulation at the alveolar location and/or were voiced were more difficult to perceive and differentiate from a consonant-vowel-consonant contrast. The p-value of the difference between location differences in consonant clusters was 0.008, and the p-value for the difference between voiced and voiceless consonant cluster perceptual accuracy was 0.02, therefore significant. I also analyzed possible factors that affected the perceptual performance of participants, such as possible response biases, which were deemed to have an insignificant effect on results. By understanding people's capabilities of learning different language constructions, researchers can better create language learning treatments.

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