Fluency outweighs pronunciation for understanding non-native English speakers

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Pronunciation accuracy may not be the most important thing for making non-native English speakers easier to understand, but rather it is their fluency, including fewer pauses, restarts and speech rate, according to research from Purdue University.

"We found that people who speak English as a second language were more likely to be judged as easy to understand when they spoke with fluency, regardless of the accuracy of their pronunciation," said Alexander L. Francis, an associate professor of speech, language and hearing sciences who studies speech perception and cognitive hearing science. "With more fluent speech, listeners are not working so hard to keep track of what the speaker is trying to say, so they can devote more effort to figuring out sounds the speaker is trying to produce. These findings could mean a new approach for second-language instruction and assessment, but more study is needed and we are taking a closer look at the difference fluency makes."

Francis and doctoral student Mengxi Lin presented their findings Tuesday (May 6) at the annual meeting of the Acoustical Society of America in Providence, Rhode Island. The paper related to the presentation is available online and it will be submitted for journal publication.

The findings are based on the speech of 20 non-native speakers of English whose first language was Chinese or Korean. Their audio speech samples, which varied from low to high proficiency, were played for
native English speakers. In the first group of English-speaking listeners, they ranked the speech samples based on acceptability, intelligibility and understanding. In the second group, the listeners participated in a listening task to objectively assess the speakers' capability of being understood. The data also was assessed for speech rate, pause duration and sound properties related to pronunciation accuracy.

"Our results suggest that achieving proficiency may depend more on developing fluent speech patterns and less on attaining pronunciations that are perceived as native-like to native speakers," said Lin who is studying linguistics. "These findings may sound counterintuitive, but as the speakers with better fluency in this study also received higher subjective ratings of intelligibility and acceptability and lower ratings of listening effort, it suggests that native listeners are better able to cope with divergent pronunciations if they appear within otherwise fluent speech."

The researchers are further studying this by evaluating the role played by fluency's characteristics such as speech rate and frequency of pauses. While they are evaluating the speech of native speakers of East Asian languages, they believe the results would be the same for other languages as well.

"If it is the case that fluency is the most significant factor, then poorly fluent speakers from any language should fare worse than highly fluent speakers from the same language," Francis said. "But this would need to be tested to know for sure."

**More information:** The paper, "Fluency, Intelligibility and Acceptability of Non-native Spoken English," is available online: [asa.scitation.org/doi/abs/10.1121/1.4877285](asa.scitation.org/doi/abs/10.1121/1.4877285)