

The value of experience: Leveraging shared indexical structure in understanding novel talkers

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Listeners rapidly adapt to unfamiliar talkers, mapping idiosyncratic acoustic cues to existing linguistic categories. This experience-dependent adaptation informs subsequent processing of the speech signal. Using the naturally degraded signal of dysarthria, a motor speech disorder with neurological origins (e.g., stroke, brain injury, nervous system disease), we investigate how indexical structure can be leveraged by the speech perception system. This presentation will focus on the differential value of prior experience in understanding novel talkers by varying acoustic cues in terms of perceptual similarity, intelligibility, and structured regularity. Data from tasks targeting talker-specific and talker-independent adaptation will be presented, suggesting that while specificity is key, listeners are sensitive to shared structure across talkers with similar ways of speaking. This talk will also highlight the role of feedback during prior experience. Implications for general mechanisms of speech learning will be discussed.