

Listeners' use of sociolinguistic information during early phonetic judgments.

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Recent work in speech perception and sociolinguistics suggests that listeners' beliefs about speaker identity can influence both perceived speaker identity and placement of categorical boundaries (e.g. Rubin 1992, Hay *et al.* 2006, Staum Casasanto 2009b, Staum Casasanto 2009a) These results are generally interpreted as evidence for an exemplar model of speech perception in which sociolinguistic knowledge is stored alongside phonetic detail. Johnson (2006) suggests that activated sociolinguistic knowledge will promote otherwise less categorical exemplars. One might therefore expect the time course of word identification to reflect an early facilitatory effect for matching indexical information or, conversely, an inhibitory effect for mismatched indexical information/audio pairs.

We monitored listeners' eye movements in two visual-world speech perception experiments with a between-subjects design. In Experiment 1 listeners believed a native English speaker to be either Asian or Caucasian. Listeners who believed the speaker to be Asian reported hearing a Chinese accent but showed no increase in first fixation time to the target word relative to fixation time for listeners in the Caucasian face condition. However, *after* the correct initial fixation was made, listeners in the Asian face/American voice condition showed a significant reduction in dwell times to the correct image.

Experiment 2 replaced the Native English speaker with a Chinese speaker of L2 English. There was no apparent facilitatory effect for matching indexical information when Asian face was paired with Chinese voice. Indeed, the Asian face/Chinese voice condition had higher latency than the Asian face/American voice condition.

These surprising results suggest that any inhibitory or facilitatory effect of indexical information may occur *after* the lexical item has been initially activated and are therefore inconsistent with the view that sociolinguistic knowledge is responsible for the promotion or suppression of stored exemplars.

References

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