

**ACOUSTICS2008/2681**  
**Listeners' sensitivity to talker differences in voice-onset-time:**  
**Segments versus features**

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Recent findings indicate that listeners are sensitive to talker differences in phonetic properties of speech, including voice-onset-time (VOT) in word-initial voiceless stop consonants. Here we extend earlier findings from our laboratory [J. S. Allen & J. L. Miller, *J. Acoust. Soc. Am.* 115, 3171-3813 (2004)] by examining the level of representation underlying this sensitivity. In familiarization phases, listeners heard two talkers produce pain. Critically, word-initial VOTs were manipulated such that one talker produced short VOTs and the other talker produced long VOTs. In test phases, listeners were presented with a short-VOT and long-VOT variant of either pain or cane; in both cases, listeners were asked to select which of the two VOT variants was most representative of a given talker. Results to date indicate that which variant of pain is selected at test is in line with listeners' exposure during training (replicating earlier findings), and that this effect holds even when listeners are tested on cane, which begins with a different voiceless stop than heard during training. These results suggest that listeners are sensitive to talker differences in VOT at the level of a phonetic feature, rather than at the level of a particular phonetic segment.