“The central role of phonetic detail in the processing of non-native sound sequences”

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A number of studies in cross-linguistic processing have argued that native phonotactic restrictions prevent listeners from accurately perceiving non-native consonant sequences. The majority of these studies have manipulated phonological variables such as the linear combination of segments, syllable boundaries, or sonority distance in an effort to show that phonological structure is of paramount importance in accounting for the “perceptual illusions” that seem to arise. More recently, a complementary line of research has begun to show that the interpretation of fine-grained, non-contrastive phonetic detail has a substantial effect on performance on non-native phonotactic structures (e.g., Dupoux et al., 2011; Davidson and Shaw, 2012; de Jong and Park, 2012). The focus of this talk is to make the case that without carefully considering and controlling for how listeners interpret such low-level phonetic detail, the actual contribution of phonological structure to understanding how non-native sequences are perceived cannot be properly assessed. The main evidence for this argument comes from a series of studies (in collaboration with Colin Wilson) showing that small manipulations of non-contrastive phonetic detail, such as the duration and amplitude of stop bursts, extensively affect how listeners process non-native onset clusters. In addition, changing task variables, such as presenting stimuli using multiple talkers or including orthography in the experiment, also has a substantial effect on the types of modifications that participants perceive and produce. This research suggests that modifications of non-native sequences in perception and production are conditioned by native language-specific knowledge, but careful experimental work is required to better understand the division of labor between phonological representation and phonetic implementation.

Place: The Faculty House
64 Morningside Drive
Columbia University

Time: 4:00 PM

For directions to the Faculty House, please refer to the map at this URL:


RSVP: If you will attend the meeting on February 1, please send a note to:

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If you will join Professor Davidson for dinner at the Faculty House after the meeting, please indicate this in your rsvp.