

been calculated, to our knowledge. We recorded 12 Sinhala speakers saying 48 randomized words in a carrier sentence (6 vowel types  $\times$  4 long-short minimal pairs), for a total of 576 samples to determine duration ratios. Results showed the Sinhala long vowels were approximately 2.4–2.8 times longer than short vowels, an even larger difference than Japanese. We hypothesized that naive Japanese listeners would perceive Sinhala vowel-length differences with a high degree of accuracy, but that they would have trouble with the vowel /æ/ that is not in their inventory. Perceptual tests were conducted with 22 naive Japanese listeners and 9 native Sinhala controls, who completed 96 reaction-time trials each, totaling 2976 responses. Japanese listeners demonstrated higher mean accuracy (94% vs. 93%) in distinguishing Sinhala vowel lengths, but Sinhala listeners were significantly faster. Both groups had higher reaction times in identifying the vowel /æ/.

**4pSC51. Consideration on multiple body-conduction transfer functions contributing to speakers' own voice perception.** Teruki Toya (Faculty of Eng., Graduate Faculty of Interdisciplinary Res., Univ. of Yamanashi, 4-3-11 Takeda, Kofu, Yamanashi 400-8511, Japan, [t.toya@yamanashi.ac.jp](mailto:t.toya@yamanashi.ac.jp))

Speakers perceive their own voices, transmitted through both air-conduction (AC) and body-conduction (BC) pathways. BC voice transmission is divided into at least two different types: induction of sound in the ear canal (EC) due to vibrations of the EC wall (i.e., the outer-ear BC component) and transmission of bone/tissue vibrations to reach the middle/inner ear directly (i.e., the middle/inner-ear BC component). The author's group has continuously attempted measuring transfer functions of those two pathways and simulating one's own voice using the transfer functions. However, our previous attempt remained to be discussed regarding (1) methods of transfer function measurement and (2) different trends among articulation. The present study measured the acoustic transfer function between the oral cavity and the EC (which corresponds to the outer-ear BC component) and the vibration transfer function between the larynx and the condyle (which corresponds to the middle/inner-ear BC component) separately to explore amplitude and phase characteristics of the BC voice for multiple articulations. For both the former and latter transfer functions, lower frequency components (e.g., below 500 Hz) were found to be relatively preserved. Moreover, local trends of the transfer functions were found to be strongly dependent on the articulations.

**4pSC52. Signal variability in accented speech listening: Effects of expected versus unexpected segmental errors.** Jane Gilbert (French & Italian, Indiana Univ., 355 Eagleson Ave., Bloomington, IN 47406, [jane-gilb@iu.edu](mailto:jane-gilb@iu.edu)) and Corentin Mazet (French and Italian, Indiana Univ., Bloomington, IN)

Although L2-accented speech can hamper word recognition, L1-listeners can adapt to variability in the acoustic signal of non-native speech. It is still unclear whether listeners facilitate lexical recognition during processing by making predictions about accent-specific error patterns. In this study, we manipulate the expectedness of a segmental error (insertion and deletion of word-initial /h/) by presenting the same error in French-accented English (where /h/ errors are expected) and Russian-accented English (unexpected). L1 English listeners assess the validity of a sentence that may contain an /h/-based error (e.g., *ot dogs* \*[ɔtdɔgz] or *heagles* \*[hɪglz]) by pressing True or False. Reaction times from target word unicuity point (point of disambiguation of target lexical item) to keypress are taken as a measure of word recognition speed. We compare reaction times between accents: while for French-accented English /h/-based errors are predictable, and thus not expected to slow down listeners, this isn't the case for Russian-accented English, for which we expect /h/-based errors to slow down listeners. Preliminary data show the expected differences in reaction times between stimulus accent (French vs. Russian) and error type (insertion versus deletion), particularly for participants with high exposure to accented speech, suggesting processing accommodation to accent over time.

**4pSC53. Merged perception of PIN and PEN: Interspeaker variation or partial merger in perception?** Irene B. Smith (Linguist., McGill Univ., 1085 Ave. du Docteur-Penfield, Montreal, QC H3A1A7, Canada, [irene.smith@mail.mcgill.ca](mailto:irene.smith@mail.mcgill.ca)) and Meghan Clayards (Linguist., McGill Univ., Montreal, QC, Canada)

Merged production of /t/ and /ɛ/ before nasal consonants is well documented in Southern US English. In a previous study of merged perception of the /t/-/ɛ/ contrast, we found that Southern listeners were *partially* merged in perception, in the sense that they were less sensitive to the contrast pre-nasally than pre-orally, but still not fully merged. However, the existence of individual partially merged Southern listeners was left unexplored. In the present study, we ask how many of the Southern individuals are partially merged in perception, as opposed to being fully merged or not merged. A 2AFC perception task asked US listeners from inside or outside the South to categorize stimuli on continua from *bid* to *bed* and *bin* to *Ben*. We fit a logistic regression model on probability of /ɛ/ responses as a function of continuum step, coda nasality, and individual. We found that most Southern listeners were partially merged, and the remainder were split between fully merged and not merged. In contrast, most non-Southern listeners were not merged. This finding supports the generalization that partial merger in perception is possible at the individual level, and indeed it is the most common outcome for the Southern individuals in this study.

**4pSC54. Cross-linguistic transfer in lexical stress perception: A cue-weighting typology.** Annie C. Tremblay (Chicano Studies, Lang., and Linguist., Univ. of Texas at El Paso, 500 West University Ave., Liberal Arts 137, El Paso, TX 79912, [actremblay@utep.edu](mailto:actremblay@utep.edu)), Mirjam Broersma (Radboud Univ., Nijmegen, Netherlands), Taehong Cho (Hanyang Univ., Seoul, Korea (the Democratic People's Republic of)), Hyojun Kim (Psychol. and Brain Sci., Univ. of Iowa, Iowa City, IA), Zhen Qin, Jiayu Liang (The Hong Kong Univ. of Sci. and Technol., Hong Kong, Hong Kong), Andrea Nuñez, and Frida S. Terrazas (Chicano Studies, Lang., and Linguist., Univ. of Texas at El Paso, El Paso, TX)

This study investigates how second-language (L2) listeners from five first-language (L1) backgrounds—English, Dutch, Mandarin, Spanish, and Korean—perceive English lexical stress, focusing on their use of vowel quality, pitch, and duration cues. Participants completed a cue-weighting perception task (Tremblay *et al.*, 2021) in which two acoustic dimensions were manipulated orthogonally while the third was neutralized. Data for Dutch listeners come from the original study. Predictions about cross-linguistic transfer were based on the functional weight of each cue in the L1. The following L1 effects were predicted: For vowel quality: English, Mandarin > Dutch > Spanish, Korean; for pitch: Mandarin > Korean > Dutch, Spanish > English; for duration: English, Mandarin > Dutch, Spanish > Korean. Bayesian mixed-effects models tested the effects of cues and L1 with L2 proficiency (Lemhöfer & Broersma, 2012) as a covariate. The results aligned broadly with our predictions: for vowel quality, English > Mandarin > Dutch > Korean > Spanish; for pitch: Mandarin > Korean, Dutch > Spanish > English; for duration: English, Mandarin, Dutch > Spanish > Korean. These findings support a cue-weighting typology shaped by L1-specific cue prominence, with implications for theories of transfer and perceptual learning in L2 acquisition.

**4pSC55. Establishing the psychometric properties of three measures of speech perception.** Lee A. Drown (Univ. of Connecticut, Storrs, CT) and Rachel M. Theodore (Univ. of Connecticut, 850 Bolton Rd., Unit #1085, Storrs, CT 06269, [rachel.theodore@uconn.edu](mailto:rachel.theodore@uconn.edu))

There is a renewed interest in explaining individual variation across the cognitive sciences, including in the domain of psycholinguistics. A major barrier towards this goal is the unknown psychometric stability of common speech perception tasks—whether performance in these tasks reflect stable traits or temporary states. This study evaluated content validity and test-retest reliability for three widely used speech perception tasks: two-alternative forced-choice (2AFC) identification, AX discrimination, and visual