

International Congress of Phonetic Sciences & Psycholinguistic Representation of Tone Conference Practice Talks/Posters

Date & Time: Thursday, July 28, 10 AM – 1:30 PM

Location: AQ 6106

	Poster session and refreshments		
	Title	Presenter	Author(s)
	Music-melody Perception in Tone-language and Non-tone-language Speakers	Jennifer Alexander	Alexander, J.A., Bradlow, A.R., Ashley, R.D., & Wong, P.C.M.
10 – 11 AM	Effects of linguistic experience and tone training on Cantonese tone word learning		

The Phonetics of Final Pitch Accents in American English Polar Questions

Hedberg, N. & Sosa, J.

In an ongoing corpus study we have found that polar questions in American English tend to be low rising, characterized by a low final pitch accent followed by a rise to the end of the utterance. A study of a minority pattern of questions with a high final pitch accent followed by a rise reveals that such pitch accents often fall on a type of word that is typically unaccented, thus raising the question of whether these words are accented at all. For this paper, we subjected a small number of crucial tokens (near minimal pairs) from our database to a close analysis in order to uncover the phonetic and pragmatic factors

The Theory of Adaptive Dispersion and Acoustic-phonetic Properties of Cross-language Lexical-tone Systems

Alexander, J.A.

This is a cross-language investigation of whether and how lexical-tone-inventory size affects acoustic tone-space size. I extend to tone-systems a model of vowel-system organization, the Theory of Adaptive Dispersion (TAD) (Liljencrants & Lindblom, 1972). I examine five languages with different-sized tone inventories: Cantonese (6 tones), Thai (5 tones), Mandarin (4 tones), Yoruba (3 tones), and Igbo (2 tones). Six native speakers (3 female) of each language produced 18 CV syllables in isolation, with each of his/her language's tones, 6 times. Tonal F0 in semitones (ST) was measured at 3 equidistant points across the vowel.

Each language's tone-space was defined in two ways: (1) the F0 difference between its highest and lowest tones; and (2) a two-dimensional, onset F0 x offglide F0, space. Per the TAD, I predicted that languages with larger tone inventories would have larger tone-spaces; this was not supported by either. But the dispersion of tones in (2) supports the TAD hypothesis that sound categories will be generally well-dispersed across the acoustic tone space and will be highly contrastive.

The influence of tonal awareness and musical experience on tone word learning

Cooper, A. & Wang, Y.

Phonological awareness has been shown to play a significant role in language learning. The present study examined the effect of improving pitch identification ability and tonal awareness on Cantonese tone word learning. A group of native English listeners received three days of Cantonese tone training to first improve their tone perception. They then learned the meanings of 15 vocabulary items distinguished by Cantonese tones (i.e. word identification training), along with groups of native English non-musicians and musicians who did not receive tone training. Both the tone-trainees and the musicians obtained similar word identification proficiency levels by the end of word training and were both significantly better than the non-tone trained non-musicians. Furthermore, pre-word training tone identification scores were a significant predictor of word learning proficiency, such that higher tone identification accuracy predicted higher word identification scores. These results lend support for phonetic-phonological-lexical continuity, as enhancing listeners' tonal awareness and identification ability of tonal cues significantly contributed to success in tone word

Effect of semantic context on the perceptual learning of lexical tone

Wang, Y., Cooper, A., Wu, X. & Behne, D.

Previous research has not determined whether the inclusion of lexical semantic information facilitates or inhibits the learning of second language (L2) phonetic contrasts. The present study addresses this issue by comparing the acquisition of Mandarin Chinese tones with and without semantic contexts. Two groups of native English listeners with no lexical tone experience participated in a Mandarin tone training program where one ("No meaning") group received training with only phonetic tonal contrasts, while the

other (“Meaning”) group was additionally provided with semantic information. Results show that although both groups started comparably and improved significantly with training, the “No-meaning” trainees had significantly higher tone identification accuracy rates than the “Meaning” trainees after training. However, the inter-session tests with the training stimuli reveal the opposite pattern, where the Meaning group outperformed the No-meaning group. Together, these results indicate that, at the initial stage of tone learning, non-native listeners learn more efficiently by focusing on phonetic tonal distinctions, whereas remembering the meanings of tone words does not generalize well to tone category identification.

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