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When speech becomes emotional: cross-cultural vocal emotion recognition in Dutch and Korean

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When speech becomes emotional.

Cross-cultural vocal emotion recognition in Dutch and Korean

This dissertation investigated cross-cultural vocal emotion recognition by four groups of listeners—Dutch, Korean, American English, and French listeners, responding to emotional speech utterances produced by either Dutch or Korean actors portraying four basic (anger, fear, joy, sadness) and four non-basic (pride, relief, tenderness, irritation) emotions. Both categorical and dimensional approaches to emotions were pursued. The project comprised three perception experiments and one simulation study using machine learning based on a comprehensive acoustic analysis of the stimulus materials.

The results revealed that although the native languages of these four listener groups differ, they displayed similar recognition patterns in cross-cultural and cross-language vocal emotion recognition. All four listener groups identified vocal emotions above chance, within and across cultures, even though American English and French listeners' native language is neither Dutch nor Korean. Moreover, Dutch and Korean listeners exhibited an in-group advantage when listening to stimuli produced in their own language. Finally, all vocal emotions were analyzed acoustically in terms of five groups of acoustic parameters (pitch, amplitude, spectral distribution, duration, and laryngeal properties), and these parameters contributed differently to vocal emotion recognition.

The results of this dissertation should be of interest to sociolinguists, cultural anthropologists, social psychologists, speech technologists, and developers of foreign language learning curricula.

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