Keeping an ear out for negativity – L2 emotion recognition bias for emotional prosody

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The bilingual mind is the dimension wherein the practical aspects of the long-standing debate between universalist and culture-specific views of emotion come to a head. In the processing of emotional content of L2, does the non-native mind rely on the universal nature of emotion? Or does it struggle to reconcile different culture-specific emotion concepts? Jończyk nad Thierry (submitted) provide evidence that in early processing „the brain turns a blind eye" to negative emotions in L2. Our current results indicate that the late cognitive-affective processing yields higher recognition rates to negative than to positive emotions in L2. We followed Scherer's (2005) proposal to integrate leading research paradigms to provide an empirically-based comprehensive description of emotion processing dynamics. We implemented the two prevailing universalist emotion recognition paradigms (the dimensional view in Russell 1980, the categorical view in Ekman 1992) and a free emotion labeling paradigm to investigate how emotional prosody is processed in the non-native mind. Emotional prosody as a phenomenon straddles the line dividing the verbal and the non-verbal aspects of emotional expression/perception and therefore constitutes good material to contrast different research paradigms. Russell's two dimensions of *positivity-negativity* and *arousal* and Ekman's six basic emotions (*anger, sadness, fear, disgust, surprise, happiness*) are paradigms describing the universal principles underlying emotions and cover the non-verbal aspect of emotion expression/perception. The free label paradigm covers the verbal aspect.

We induced the emotions of *sadness* and *happiness* in 8 native speakers of English, and recorded them as they expressed their emotions spontaneously, and voice-acted valenced sentences in *sad* and *happy* tones. The emotions expressed in the recordings were rated by a group of native English-speaking judges in a variety of audio and video conditions to establish the role emotional prosody plays in recognizing emotion. For our study we selected a subset of audio recordings processed through low band pass filter (60-300Hz), as our intention was to investigate emotional prosody without interference form semantics.

Participants listened to samples of emotional prosody and categorized (into *happy/sad/other*), evaluated (in terms of *positivity-negativity* and *arousal*), and named the emotions expressed by the speakers in the samples. In all three response paradigms the participants have consistently performed better on the negative emotions. *Sadness* was recognized with greater accuracy and it was less often mistaken for other emotions than was *happiness*. *Happiness* was most often mis-recognized as varieties of *anger*. Overall, our results indicate a preferential bias for negative emotion recognition in L2 emotional prosody. The potential causes of this result and its implications for future studies of emotion will be presented for discussion.

WORDCOUNT: **423**

References:
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