

Neuropragmatics of prosody – from contour to meaning

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During verbal communication, humans regularly decode not only *what* is said but also *why*. Pragmatic theory posits that it is particularly the *why* – the communicative intention (illocution) of speakers – that drives the recipient's reactions (Grice, 1957). Intonational phonologists (Bolinger, 1986) and developmental psychologists (Malloch & Trevarthen, 2009) have long been aware of the importance of prosody for communicating social-relational (illocutionary) meaning. How the brain extracts meaning from voice tone remains, however, poorly understood. Here, I will integrate previous neurofunctional accounts of language with novel evidence from behavioural, neuroimaging, brain stimulation and cross-cultural studies to reveal the complex neurocognitive architecture of prosody perception in speech. I will show (i) dual streams for prosody in the right hemisphere, (ii) sensorimotor contributions to prosody perception, (iii) the relevance of social cognition for the extraction of meaning from prosody, and (iv) cross-cultural misunderstandings of social-relational, prosodic meaning. Taken together, this research proposes the interaction of several complementary mechanisms during prosody perception and offers a fresh look on the neural basis of interpersonal communication and mutual understanding.

Selected publications

Hellbernd N, Sammler D. (2018) Neural bases of social communicative intentions in speech. *Soc Cogn Affect Neurosci*, 13: 604-615.

Hellbernd N, Sammler D. (2016) Prosody convey's speaker's intentions: Acoustic cues for speech act perception. *J Mem Lang*, 88: 70-86.

Sammler D, Grosbras MH, Anwender A, Bestelmeyer PEG, Belin P. (2015) Dorsal and ventral pathways for prosody. *Curr Biol*, 25(23): 3079-3085.