

Abstract

The thesis investigates the differences in the neural processing of emotional and non-emotional speech. The theoretical part summarizes previous research findings on emotional language processing and the underpinnings of speech processing in the domain of neural oscillations. The empirical part reports the results of an EEG study that was conducted to explore the differences in neural speech tracking during exposure to angry and neutral speech. Twenty-six participants listened to recordings of angry and neutral conversation segments, as well as to speech-shaped noise, while their EEG was recorded. Neural speech tracking, which was quantified as oscillatory power and the inter-trial phase coherence, and the N400 component of event-related potentials (ERP) to sentence-final words were analyzed. The results revealed larger *delta*, *theta*, and *gamma* power during exposure to angry speech in comparison to neutral speech. Negative emotional valence also significantly reduced the amplitude of the N400 elicited by sentence-final words. The results demonstrate enhanced neural processing and facilitated prediction in angry as compared to neutral speech. The present study represents one of the first investigations of the oscillatory dynamics during continuous emotional speech processing.

Key words: emotional speech; neural speech tracking; anger; EEG