
Do happy words sound happy? A neuroscientific approach on phonoemotionality

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Abstract

An influential theoretical position from the field of linguistics posits an arbitrary relation between the "signified" and the "signifier" (de Saussure). Yet, the observation that the sound of words often seems to relate to their meaning has never ceased to intrigue philosophical minds from Plato to Köhler, leading them to suggest a link between sound and semantics beyond mere symbolism. Based on large-scale lexical emotion databases for 6,000 Spanish and German words we provided empirical evidence for sound-to-meaning correlations in the vocabulary of these languages: specific subsyllabic units tend to occur particularly often in words with specific emotional content - displaying substantial analogies across the two languages. To test whether sublexical phonology triggers affective processing – independently of semantics – we conducted an ERP experiment comprising parallel manipulations of

- "semantic valence" within Spanish words (positive vs. negative vs. neutral) and
- "sound-emotion" within Spanish nonwords – constructed of graphemes occurring typically in either positive vs. negative vs. neutral Spanish words.

We obtained significant ERP effects corresponding to an early posterior negativity (starting at 250ms) and a late positive complex (peaking at 550ms) - repeatedly shown to characterize emotion processing during visual word recognition – not only for the manipulation of words' semantic valence, but also – though strongly attenuated – for the manipulation of the hypothetical emotional value of sounds our nonwords were formed of. Thus, our data suggest human language processing to be sensitive to sound-to-meaning correlations with regard to emotion at a sublexical level.

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