Project

Integration of linguistic-contextual cues and prosody in processing sarcastic speech: an electrophysiological study

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Abstract

Background

Verbal irony is a mode of expression in which what is stated differs from (or is even opposed to) what is meant. Irony exists in the majority of the languages and cultures of the world (Pexman, 2008). For an ironic meaning to be conveyed, the communicative effect is based on success on the part of the listener to understand the ironic intent of the utterance, i.e. the incongruity between the literal and the intended meaning (Ivanko & Pexman, 2003). Moreover, note that several research sources have highlighted the importance of prosody (intonation, rate/rhythm, phrasing) as a cue for detecting sarcasm. Irony cues can in fact be conveyed lexically (e.g., use of exaggerated adjectives and adverbs), nonverbally (e.g., facial expressions), pragmatically (violations of Gricean maxims) and through prosodic modulations (Attardo et al., 2003; Bryant & Fox Tree, 2002; inter alia). Note, though, that it seems that ironic content can be identified even in absence of contextual cues thanks to global acoustic/prosodic cues (Bryant et Fox Tree, 2002). However, we still do not know what it the actual role of prosody, in particular of intonational phonology features (Ladd, 1996/2008), in irony comprehension. Other researchers claim on the contrary that irony is not associated with a particular intonational contour and that it is thanks to a multitude of cues other than intonation, including extralinguistic information, that listeners manage to recognize that a statement is ironic (Bryant & Tree, 2005). For instance, it has been shown that several factors, such as the degree of incongruity between context and speaker utterance can influence the extent to which ironic intent is perceived (Bryant and Fox, 2002; Ivanko and Pexman, 2003). It has also been shown that young children can recognize the intonational markers of sarcasm, and this ability is developmentally distinct from the ability to recognize sarcasm through semantic or contextual cues (Ackerman, 1983, 1986; inter alia).

Goals

The general aim of this project is to examine the time-course of the integration of prosodic and contextual cues in processing non-literal meaning, in particular in understanding sarcastic speech, in healthy adults. Specifically, our aim is to study the utterance comprehension when linguistic context

and prosodic cues are either congruous or incongruous with a sarcastic, non-literal interpretation, of spoken French utterances. To this purpose, we will record ERP activity in auditory mode. In the present study we intend to explore the influence of both contextual and prosodic cues of irony processing both in presence and absence of either type of information. Specifically, we will test non-serial pragmatic models of irony (Gibbs, 1994; Giora, 1999) comprehension through the ERP methodology. We will do so by verifying if both the preceding discourse context as well as speech prosody cues will lower N400 amplitudes while processing sarcastic speech. We also predict that both congruent contextual factors and congruent prosodic cues, in a manner similar to extralinguistic information about speaker's characteristics, might affect later stages of processing (P600) in which different types of information are integrated (Lattner & Friederici, 2003). From a more general point of view, this research will help uncover the role of prosody in pragmatic meaning comprehension. The results of the present research program will contribute to a better understanding of the brain and cognitive mechanisms allowing high level linguistic processing, in line with the main goals set by the BLRI.

Publications

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