Processing of Ironic and Non-Ironic Sentences Examined with ERPs

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Methods

Materials
• Whether or not a specific sentence is perceived as ironic or non-ironic depends primarily on its foregoing context besides other cues, e.g. prosodic or visual ones.
• For each potential target sentence we created a
  • negative discourse context leading to an ironic sentence meaning and
  • positive discourse context leading to a non-ironic sentence meaning.
• Target sentences consisted mainly of five words. The sentence final word was critical for understanding the sentence meaning within the relevant context (see Table 2).

Procedures
• Close procedure: Sentence final words of ironic and non-ironic target sentences both showed high expectancy rates (ironic completion 98%, non-ironic completion 96.7%).
• Rating study: Ironic and non-ironic target sentences were perceived as such (rating score difference of about 3 on a 5-point scale, paired t-test: p<0.001).

Prosedric realization
• All items were spoken either in a natural normal or in a natural ironic way leading to two prosodically different realizations.
• Acoustic analyses (using the PRAAT-sound editor) revealed an initial and final lengthening, higher overall F0 values and a permanent lower intensity for ironic target sentences.

Experimental Conditions
• Experiment 2: Gradually marked sentences (ironic/non-ironic) and context type (negative/positive) were fully cross-validated. Thus, 4 experimental conditions were created: in two of them the target sentence prosody was congruent with the preceding context, in the other two prosody was incongruent (see Table 3).
• Experiment 2: Instead of prosodic cues, the visually presented target sentences contained either quotations marks or non. Quotations marks (‘‘with/without) and context type (negative/positive) were fully crossed leading to two congruent and incongruent conditions (see Table 3).

Reference