

THE DISSOCIABLE TWO-STAGE PROCESSING OF IRONIC CRITICISM AND IRONIC COMPLIMENT

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Irony expresses an intended meaning using words with opposite meaning to what is intended. Depending on the valence of the intended meaning, irony can be distinguished into two types: ironic criticism, which expresses a negative intended meaning by positive literal words, and ironic compliment, which expresses a positive intended meaning using negative literal words. Previous ERP studies observed that, compared to literal sentences, ironic criticisms induced larger a P200 at an earlier stage of processing and a larger P600 in the late stage of pragmatic inference. However, little research has been done to examine the processing of ironic compliment.

To examine potential difference between the processing of the two types of ironies, we asked participants (20 males, 20 female) to read scripts, each consisted of a context regarding a speaker and an addressee and a target sentence said by the speaker. Depending on the type of the target sentence, each script corresponds to one of four conditions: ironic criticism and ironic criticism control, and ironic compliment and ironic compliment control. The control sentences were the same as the corresponding experimental sentences but expressed literal meanings. Participants answered comprehension questions after reading one-third of the scripts and rated the degrees of humor and sarcasm of the target sentences after the EEG experiment.

The ERP results showed that, at the critical words in the target sentences, ironic compliment induced a larger P200 relative to its control; this effect was absent for ironic criticism. Both types of ironies induced a larger P600 relative to literal controls but with distinctive topographic distributions. The P600 effect for ironic compliment was posteriorly distributed at both hemispheres, while the effect for ironic criticism was centrally distributed. Decoding analysis confirmed the differential ERP effects for the two types of ironies by showing the above chance accuracies of discriminating ironic criticism from ironic compliment in both the P200 and P600 time windows. Moreover, the P600 effect for ironic criticism was correlated with the rating of sarcasm. These findings convergently demonstrated that the processing of ironic criticism and ironic compliment is differentiated in both the early stage, in which the discrepancy between the context and literal sentential meaning is firstly detected, and the late stage, in which the speaker's intended meaning is recovered.

Key words: irony, criticism, compliment, conflict detection, pragmatic inference