

Report for: Testing theories of irony processing using eye-tracking and ERPs

The aim of the proposed project is to carry out a series of studies in order to test the predictions of contemporary theories of irony processing. Despite the fact that irony is a common communicative tool, little is known about how people process and understand ironic utterances. There are a number of theories of irony comprehension, including; the Standard Pragmatic View (e.g. Grice, 1975; Searle, 1993), the Direct Access View (e.g. Gibbs, 1994), and the Graded Salience Hypothesis (e.g. Giora, 1997). However, a limited amount of empirical work has tested these theories, and to date, most studies have simply compared processing of ironic vs. non-ironic statements. A key aspect of the graded salience hypothesis distinguishing it from the other accounts is that it predicts differences between the processing of familiar vs. unfamiliar ironies. We aim to examine this issue using two converging methodologies. Specifically, we plan to record participants' eye movements while they are reading (Exp. 1) and electrical brain activity while they are listening to (Exp. 2) familiar and unfamiliar ironies. Examining differences in processing would allow us to distinguish the predictions of contemporary theories of irony comprehension.

This report details the activities achieved on the first of three proposed exchange visits between the University of Nottingham, UK, and the University of Tübingen, Germany. In this initial visit, Dr. Ruth Filik from the University of Nottingham visited Prof. Hartmut Leuthold at the University of Tübingen between 16th and 23rd December 2010.

Purpose of the visit

The aim of the initial visit was for Ruth Filik to visit Tübingen for a week in order for the researchers to jointly finalise the experimental design and to develop experimental materials.

Description of the work carried out during the visit

During the visit, the design of the study was first finalised. Specifically, it was determined that both the eye-tracking and the ERP study would consist of a 2(ironic vs. non-ironic) x 2(familiar vs. unfamiliar) design, yielding four experimental conditions as follows (critical analysis word underlined):

1a. Familiar irony

Laura was stuck in a traffic jam, and the sign above the road flashed, "Long delays for the next six miles". "That's just great!" said Laura to her dad, who was sitting in the back.

1b. Corresponding non-ironic statement

Laura was driving to the city centre, and the sign above the road flashed, "No delays on this stretch of the motorway". "That's just great!" said Laura to her dad, who was sitting in the back.

2a. Unfamiliar irony

Billy and Angel were on the ferry on the way to their holiday. The waves were six feet high and the ship was rolling all over the place. "The sea is really calm!" said Billy to Angel as he held on to the hand rail.

2b. *Corresponding non-ironic statement*

Billy and Angel were on the ferry on the way to their holiday. There was not a wave in sight and the crossing was unbelievably smooth. “The sea is really calm!” said Billy to Angel as he held on to the hand rail.

During the visit, a set of 48 such materials were developed for use in the eye-tracking study. On return to the UK, Ruth Filik has since pre-tested these materials to ensure that the experimenters’ intuitions regarding what is and what is not a familiar irony are shared by the undergraduate population who will be participants in the main experiments. This pre-testing procedure resulted in the final selection of 44 materials for use in the eye-tracking study (22 familiar ironies and 22 unfamiliar ironies, along with their non-ironic counterparts). Collection of eye-tracking data has now commenced in the UK, and is expected to be completed by the end of March. Construction of further materials for use in the corresponding ERP study has also commenced. The 44 materials developed for the eye-tracking study will form the basis of the ERP stimulus set, with further materials currently being developed (and pre-tested) to yield a final set of 40 per experimental condition, as is typically used in ERP studies of language comprehension.

Future collaboration with host institution

This was the first of a series of three collaborative visits, funded by the European Science Foundation for the activity entitled “Experimental Pragmatics in Europe.”

Projected publications/articles resulting or to result from the grant (ESF must be acknowledged in publications resulting from the grantee’s work in relation with the grant).

Depending on the results of the experimental work, it is projected that the eye-tracking and ERP studies will be written up together and submitted to a psycholinguistics journal such as *Journal of Memory and Language*, or *Language and Cognitive Processes*.