A really great study it is, isn't it?

We encounter non-literal language daily, the majority of which is verbal irony and sarcasm (Whalen et al., 2009). Gibbs (2000) suggests that irony makes up about 8% of all language. Especially in written text, unable to rely on paralinguistic cues such as facial expression and tone, it can be difficult to correctly identify the intended meaning of a message (Burgers & Van Mulken 2017, Attardo et al., 2003). Yet, there are a variety of specific linguistic cues, which have been noted to be present when a speaker intends an ironic meaning (Whalen et al., 2013) and these cues have been categorized by Burgers in 2010.
Previous research has focused on which linguistic cues can function as ironic markers and why (Attardo et al., 2003, Burgers & Van Mulken, 2017). Little research however focusses on the comprehension and interpretation side to test whether or not the presence of such linguistic cues – irony markers – does indeed influence interpreters' inference of a non-literal meaning for an utterance. In an age of increased written communication, it is important to understand how readers are able to pick up on those cues and use this information in their interpretation process. This study focusses on 3 of these markers of irony, which have been identified to aid transferring ironic meaning (Burgers, 2010) and tests participants' sensitivity to these markers in making an interpretation of non-literal/ironic intentions. These markers are focus topicalization, exaggeration/hyperbole and tag questions. Under an account in which all cues carry similar properties and combine additively, we'd expect comprehenders to be more likely to make an inference of non-literal intention when all three cues are present.

In this web-based study we tested 59 native English speakers (16 female, 43 male) on their sensitivity to such markers and their tendency to use these to make an inference about the writer's intention. Each participant was randomly assigned to one of 4 testing groups. The study trials a novel methodology in irony research in which speech attribution is used to determine readers' interpretation of a speaker's intention. After a short introduction of the two characters, one described as very literal and one as often ironic, participants were told that the sentences they were about to see were excerpts from a conversation between them. The participants were then asked to assign 22 utterances to one of the two characters by clicking on that character's image. 14 of these utterances, including 2 catch trials, were filler sentences that were the same across groups and had no obviously intended underlying meaning (no intended irony: e.g. "Oak trees are so fascinating. Did you know they can live up to 1000 years?"). The 8 target sentences were 4 sentences in each condition, literal (1) and non-literal (2) meaning.

(1) Literal statement – canonical syntactic structure
e.g. *"He is a good friend."*
(2) Non-literal (ironic/sarcastic) statement – containing 3 irony markers/cues
e.g. "*A really good friend he is, isn't he?*"

The responses were measured in clicks on the assigned speaker.
The overall mean for selecting the non-literal character (therefore the ironic interpretation) was *.503*, indicating that there was no general response bias or preference in selecting speakers.

Figure 1 shows the response means in the two Conditions, with Condition 1 having no markers and Condition 2 with 3 irony markers present. A mixed-effects logistic regression, with Condition as the fixed effect and Participant and Item as random effects, was used to model the probability of clicking on the ironic speaker. The maximum model to converge had random intercepts by Participant and Item, as well as a random slope of Condition by Item. Our results suggest that, as hypothesised, the presence of irony markers increases the likelihood that a reader will interpret a sentence as non-literal (β=.80, ± = .40, $p < .05$).

Our findings suggest that readers use linguistic cues in the comprehension process to make an inference about a writers intended meaning, even when paralinguistic cues, such as intonation or visual markers like winking and smiling are not present. Follow up research will determine how sensitive comprehenders are to a variety of individual irony markers, and which of these cues is stronger in signalling a non-literal meaning to the interpreter. A further outlook is to include mouse tracking to further investigate the interpretation process.

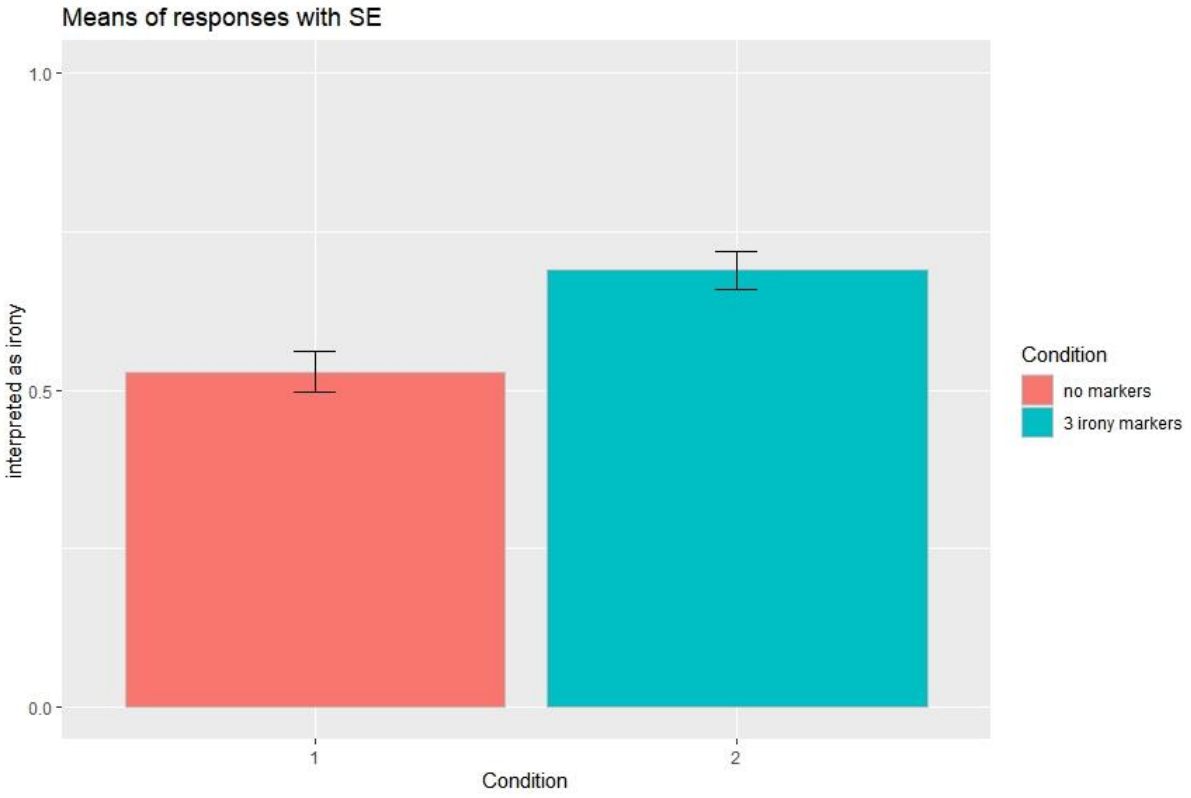

Figure 1- Average of responses to infer ironic meaning to trial sentences in both Conditions with standard error

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