

Irony Regulates Negative Emotion – in Speakers and Listeners

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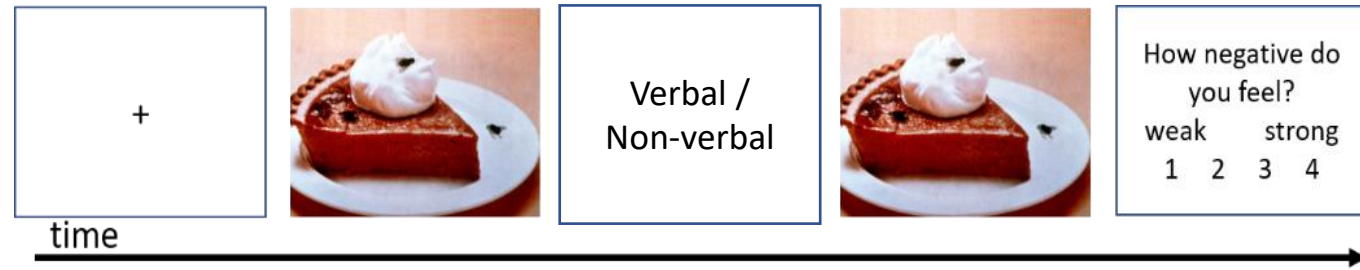
Verbal irony: literal meaning contrasts with intended meaning

- e.g.: “How sunny!” when it’s raining
- Irony is primarily used to express negative emotions
- **mildens negativity compared to literal (*tinge hypothesis*)**
 - irony dilutes negativity for **speakers** (e.g. eyetracking, ERP, ratings)

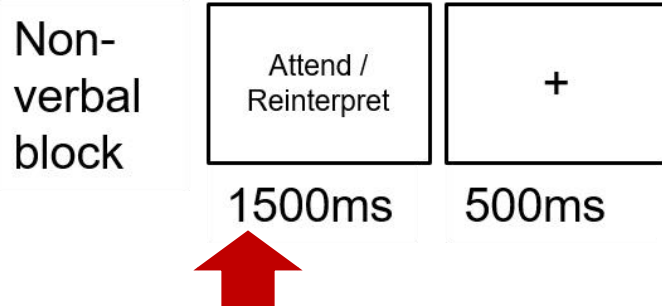
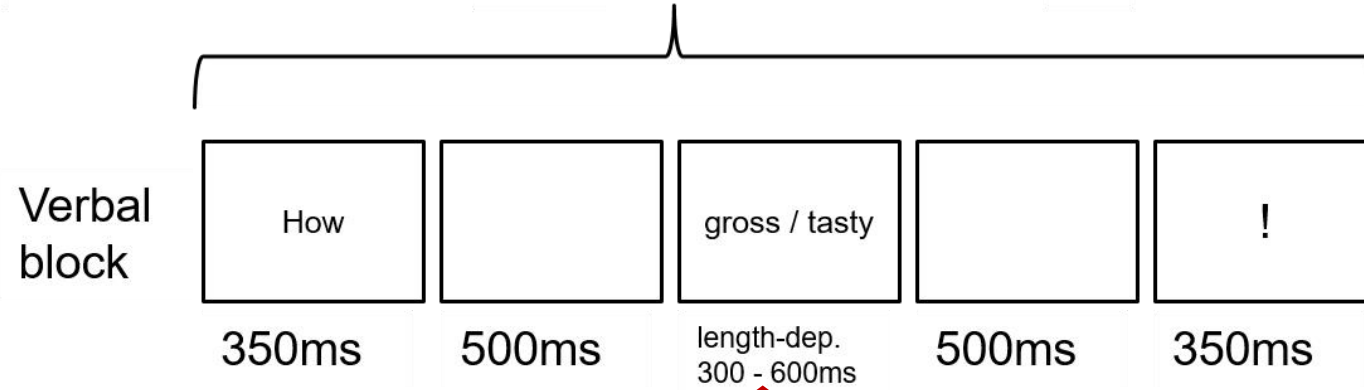
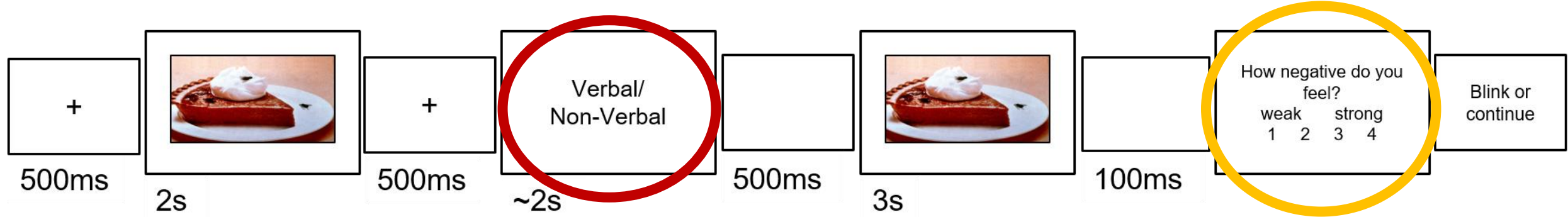
What’s the Mechanism?

- **cognitive reappraisal; a form of emotion regulation**
 - Reinterpreting the emotional cue to make it less negative
- **Participant = involved as listener**

Design

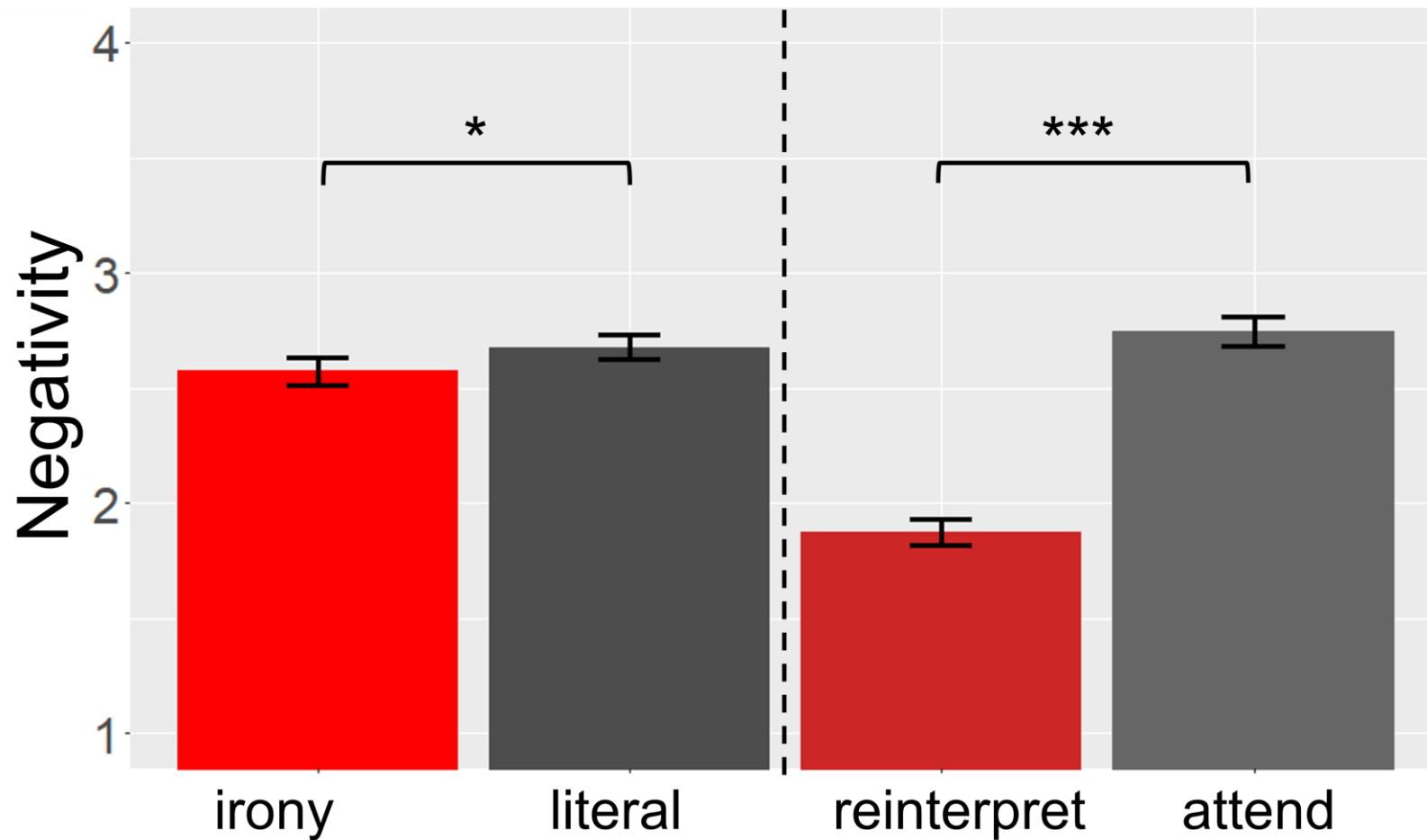


- **132 negative images**
 - “imagine that the negative situation in the image is happening to you”
- **2 blocks**
 1. **verbal**: irony, literal
 - statements matched for length, frequency, orthographic and phonological neighborhood
 - [A cracked phone screen]: “Such skillful handling”
 - [Dropped food]: “How yummy!”
 - [A flat tire]: “Pretty filled!”
 2. **non-verbal**: attend, reinterpret
 - Instructions given how to use the reappraisal strategy in line with prior literature
- **Task**: “How negative do you feel?” (1 = weak – 4 = strong)



*Predictions: **behavioral** and **ERP** effects for cognitive reappraisal are comparable to those for irony*

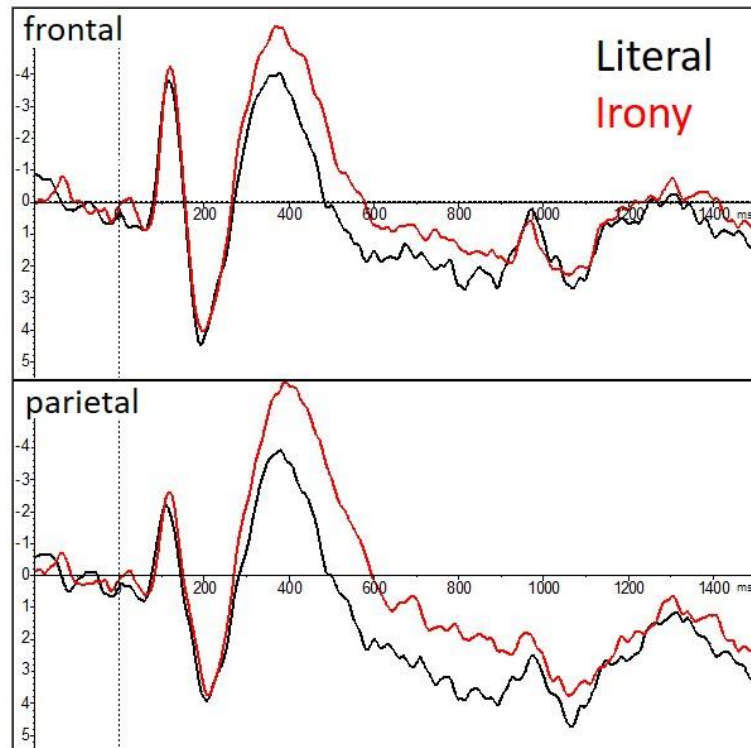
↑ Behavioral Results ($N = 54$)



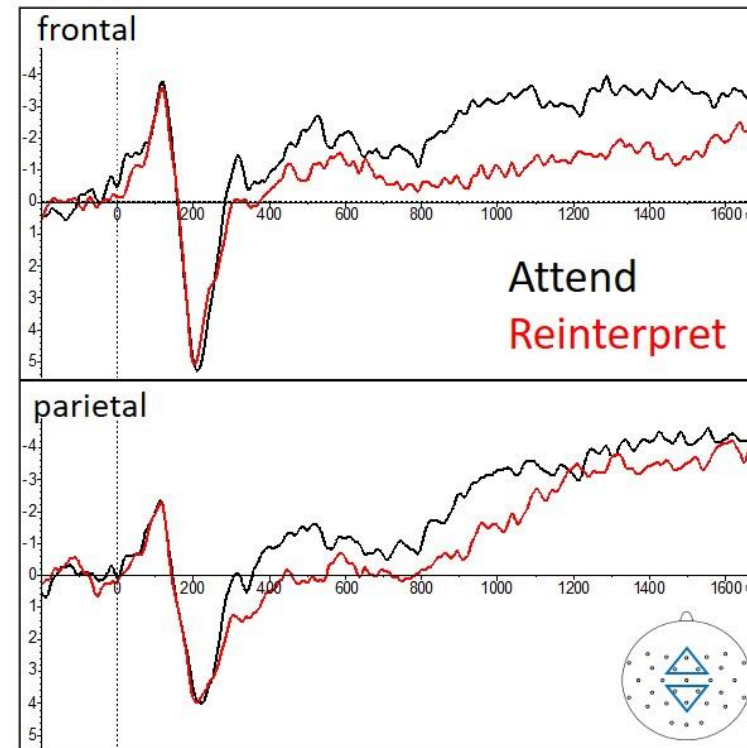
- irony < literal ($p = .03$)
- literal = attend
- reinterpret < attend ($p < .001$)
- reinterpret < irony ($p < .001$)

↑ ERP results ($N = 43$)

Verbal Block



Non-Verbal Block



- Irony > literal: N400 (300-500 ms)
- Irony < literal: LPC (600-900 ms)
 - Sustained negativity
- reinterpret < attend: N400 (300-550 ms)
- reinterpret > attend: *frontal* LPP (800-1500 ms)
 - Decreased negativity

Behavior: IRONY < LITERAL

- in line with *tinge hypothesis*
- expands previous research from bystanders to listeners
- But: irony is not as effective as reappraisal

ERP: irony and reappraisal act in **related, yet different ways**

- Ironic words *contrast* the scene depicted by the image
- contrast continued to be processed (elaborate or integrated) reflected by the sustained negativity
- Cognitive reappraisal recruits later and more frontal resources, potentially linked *to executive control or imagination*

Conclusion:

- Irony is **indirect yet effective tool in reducing negative emotions in others**
 - *Does not require active participation from the listener*
- Irony mildens negativity in **speakers** and in **recipients**
 - Irony's pragmatic functions can be both *self-* and *other* serving