Human and System Perspectives on the Expression of Irony: an Analysis of Likelihood Labels and Rationales

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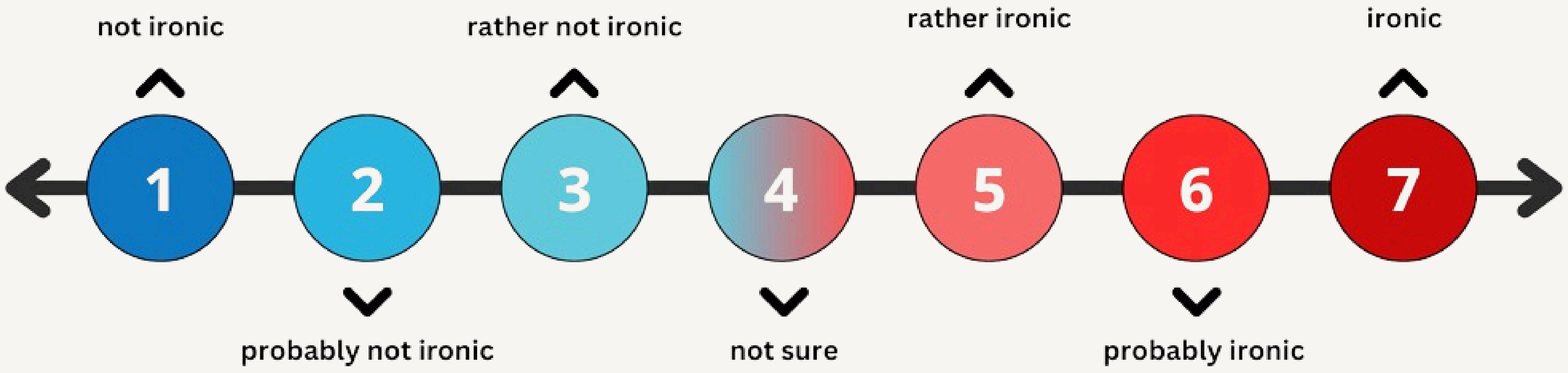
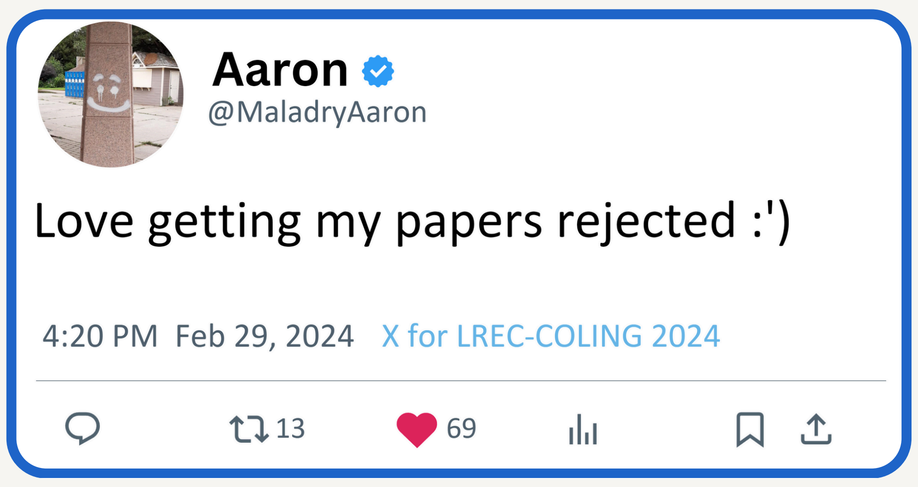
Annotation Novelty

- irony likelihood
  - including confidence measure
- trigger words
  - contrasting elements
  - implicit knowledge



Example:

- likelihood: 6/7
- triggers:
  - "love"
  - "papers rejected"
  - " :') "


Aaron
@MaladryAaron

Love getting my papers rejected :')

4:20 PM Feb 29, 2024 X for LREC-COLING 2024

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Explainability :

- explainability metrics:
  - sub-token attributions
  - Layer Integrated Gradients
- system importance
  VS human trigger words

	love	*getting*	*my*	*papers*	*rejected*	*:')*
HUM.	*1*	*0*	*0*	*1*	*1*	*1*
INIT.	*.66*	*-.06*	*.09*	*.36*	*.38*	*.49*
NORM.	*.33*	*0*	*.05*	*.18*	*.19*	*.25*

(NEW) Accumulated Precise Importance
- for each human trigger word
- add up the system attribution
- result ≈ sentence-level precision

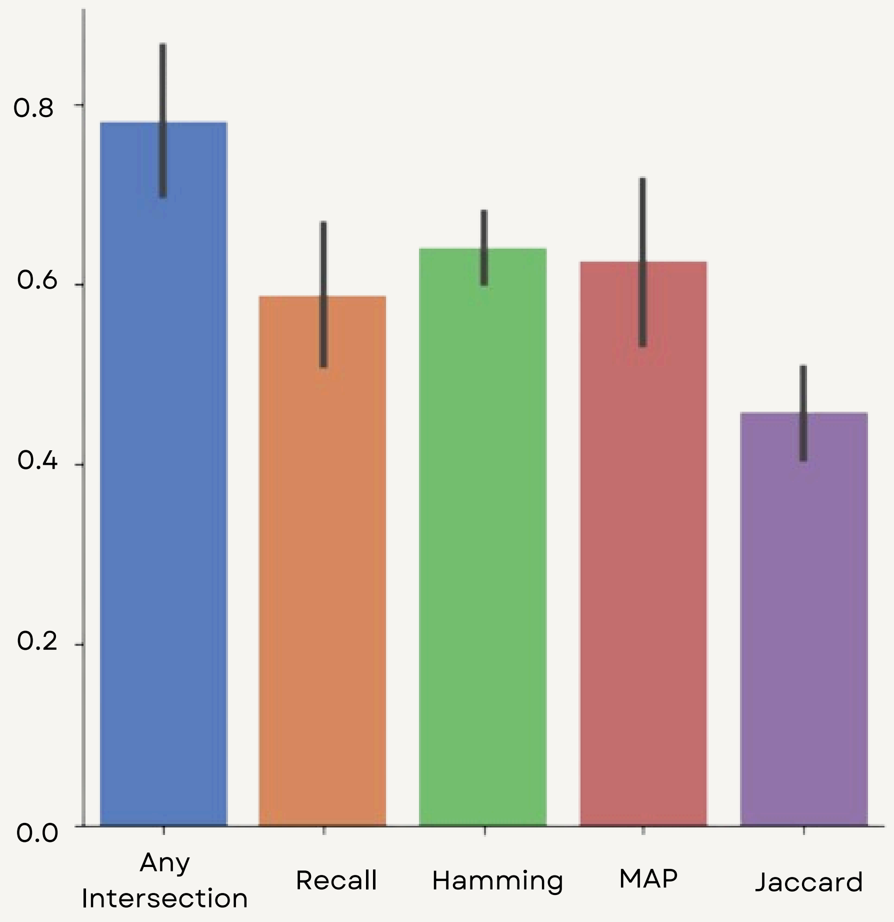
API = 95%

Corpus Stats

1. corpus:
   SemEval 2018 Task 3 (EN)
2. irony likelihood agreement:
   Krippendorff's alpha: .87
3. final label distribution:

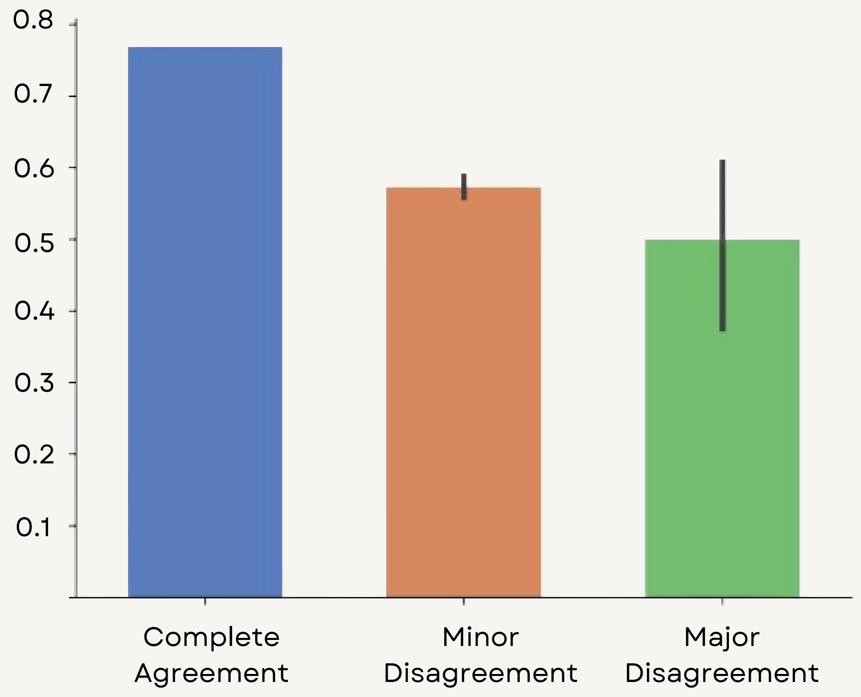
	1	2	3	4	5	6	7
n	2,778	26	179	77	271	437	1,024

4. trigger word agreement:
   complicated:

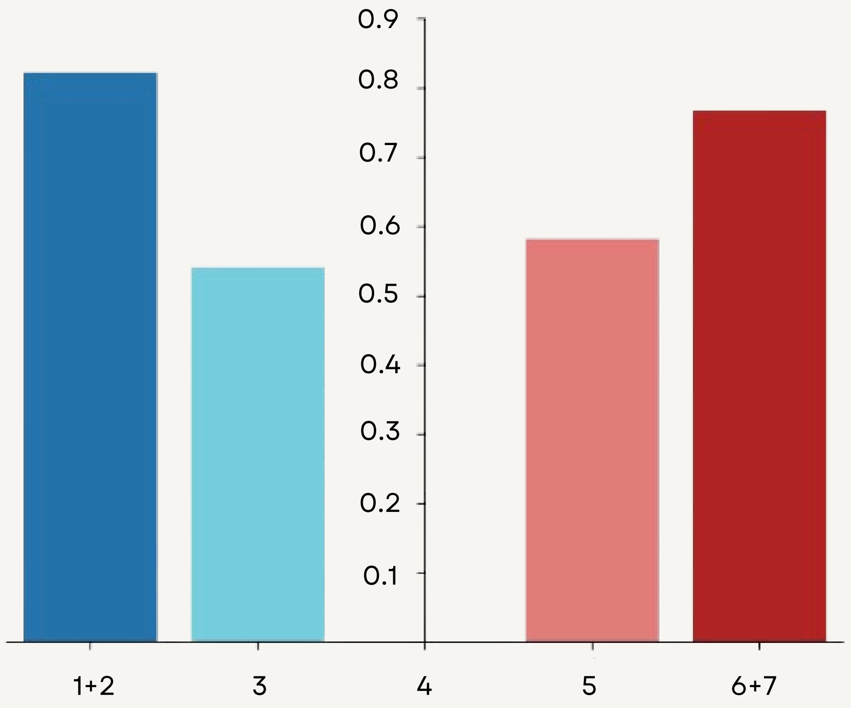


IAA metrics for trigger word annotations

Classification:



binary classification accuracy w.r.t. annotator agreement



binary classification accuracy w.r.t. irony likelihood (confidence)

Results:

explainability:
40%+ attributions
on irrelevant tokens

classification:
better binary classification on
high-confidence & high agreement

Conclusion

- explainability for complex task has room for improvement.
- future work:
  train with fine-grained labels