Examining Structural and Semantic Predictors of Announced Sarcasm on r/AskReddit

Joshua Hew (J.W.Z.Hew@sms.ed.ac.uk)[1], Aida Tarighat[2], Martin Corley[1], Zachary Horne[1]

[1]Department of Psychology, University of Edinburgh, [2]UKRI CDT in NLP, University of Edinburgh

A. Introduction

Sarcasm: Remarks that mean the opposite of what they say, often with humorous intent

1. "Boy, are we so lucky we ran into you guys"
2. "Please we really need your help"

Sar-chasm

1. "Booooy, are we *soooo* 'lucky' we ran into yooouuu guuuuys"
2. "Please we *reeaaaaally* need your hee-eeelp"

AND a sparkler?

Look friend, we're not trying to bankrupt the US government here. We all know the supreme leader needs to keep his slush fund topped off so he can make sure those vulnerable and insecure billionaires don't get screwed over by the system.

So yeah, before you go making a statement like that maybe try to see the world through the monocle of the *true* American superhero: The Hedge Fund Manager.

BLM : Billionaires Lives Matter

/s because I'm not risking someone accusing me of of posting this non-ironically.

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- ☐ Lack of common ground: **sincere** or **sarcastic**?
- ☐ Reddit users often announce that their post/comment is intended to be sarcastic by typing "/s"

- ▪ Are **structural** (e.g. elongated words) or **semantic** (e.g. political topic) features present in comments with an explicit "/s" marker?
- ▪ **Hypothesis**: More likely to announce sarcasm when discussing polarising topics, as literal interpretations might yield social condemnation

B. Methods

Data: regular and sarcastic comments from r/AskReddit (Khodak et al., 2017)

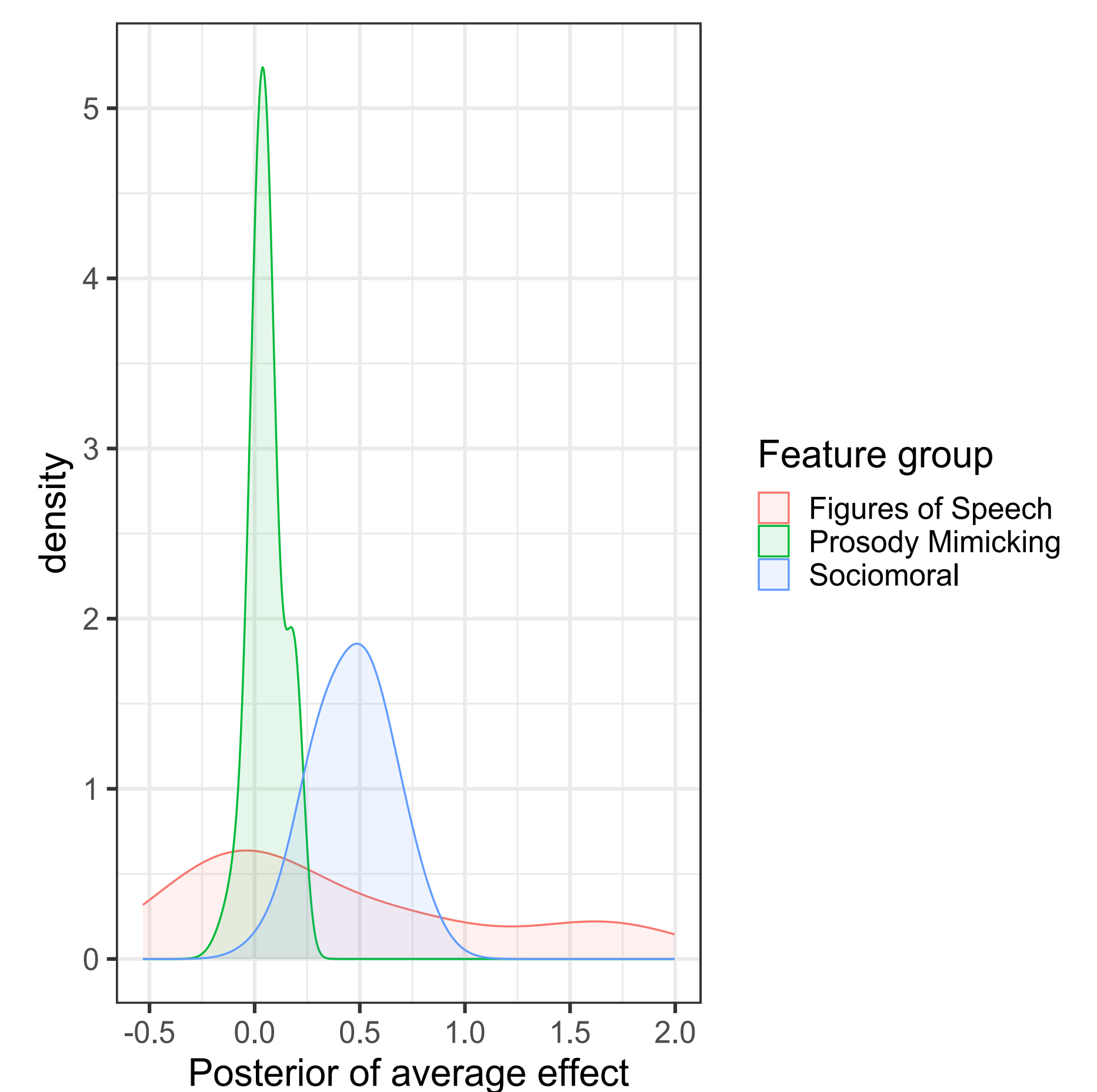We extracted the following features from the comments:

- ▪ **Figures of Speech**: Adverbs, "yeah", hyperbole, Reddit & internet slang
- ▪ **Prosody Mimicking**: Excessive punctuation, quotation marks, elongated words, fully capitalised words, interjections & emoticons
- ▪ **Sociomoral Topics**: Politics, LGBT, gender, race, religion & misc. hot topics
- ▪ **Covariates**: Sentiment, negations & stop words

We modelled all features in a Bayesian logistic regression with a horseshoe prior

Example sarcastic comments with structural and semantic features

Feature	Example Sarcastic Comment
Excessive punctuation	since you love to give things away and love your gf **...** i suppose you love giving away your gf**....**
Elongated words	Excuse me I took half a semester of psych 101 I'm **tooootaly** an expert on this subject
Interjections	**Wow** that doesn't sound like it would be unbiased or anything
"Yeah"	**Yea** it was the teenagers making memes that got trump elected
Adverbs	**Clearly** the necklace was so bad that it convinced the girlfriend to cheat
Sociomoral (race)	How could a white person get shot when he's hiding behind all that privilege
Non-sociomoral	Yeah, because advertisers aren't known for being intrusive and unrelenting or anything

C. Results

Model estimated average effects of structural (Figures of Speech & Prosody Mimicking) and semantic (Sociomoral Topics) features predicting sarcasm on r/AskReddit

- ▪ **Covariates** such as sentiment and negations were all credible predictors of sarcasm
- ▪ Some **structural features** like the use of adverbs and interjections were also credible predictors of sarcasm
- ▪ **Prosody Mimicking** features like excessive punctuation and quotation marks were not
- ▪ Consistent with our prediction: each **Sociomoral Topic** was a credible predictor of sarcasm

Qualitative Findings: Sarcastic Political Comments

- ☐ Comments are often influenced by ongoing news e.g. 2016 US elections
- ☐ Sarcastic political comments were often used to be funny or witty, to mock (make fun of certain political figures or groups), and to criticise or reprimand

D. Conclusion

- ▪ Semantic topic is a substantial predictor of announced sarcasm
- ▪ Reddit users are more likely to announce sarcasm when conversing about polarising topics; implies that they recognise the potential for misinterpretation and have a desire to clarify non-literal meaning

Future directions: directly comparing *unstated* vs. *announced* sarcasm, exploring written sarcasm use across subreddits (with varying degrees of moderation) or different social media platforms e.g. Twitter

References

Gibbs, R. W. (2000). Irony in talk among friends. *Metaphor and symbol, 15*(1-2), 5–27.
Khodak, M., Saunshi, N., & Vodrahalli, K. (2017). A large self-annotated corpus for sarcasm. *arXiv preprint arXiv:1704.05579.*