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Self Promotion in US Congressional Tweets

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Self-promotion matters for career advancement

Self-promotion is an act of presenting self as **competent** (Jones and Pittman, 1982)

Self-promotion is an important impression management strategy

- Self-promotion + ingratiation -> better interview evaluation

Women self-promote less than men due to gender stereotypes

A particular dilemma for women politicians - their job required them to self-promote, but doing so may have risked losing likeability and hurt election chances (Okimoto and Brescoll, 2010)

Can social media help close the gender gap in self-promotion?

Marginalized groups such as women politicians may gain more control in impression management strategies by directly interacting with constituents on social media platforms like Twitter.

Research goal

- This study aims to examine whether a gender gap in self-promotion exists among Congressional tweets.
- We seek answers to the following research questions:
 - To what extent can computers identify self-promotion tweets from Congress people?
 - Who performed more self-promotion on Twitter, men or women?

Research method

1. Annotated a corpus of 4,000 tweets as self-promoting or not
2. Used the annotated corpus to fine-tune a BERT model to identify self-promoting tweets
3. Used the model to examine 2 million tweets by Congress members from July 2017 to March 2021
4. Ran a mixed-effects regression model to investigate the gender gap in self-promotion

Annotated corpus: Common types of self-promotion tweets

- Tweet about events featuring self, e.g. public speeches
- Tweet about work progress and accomplishments, e.g. introducing or passing bills, chairing a committee
- Tweet about endorsements and awards

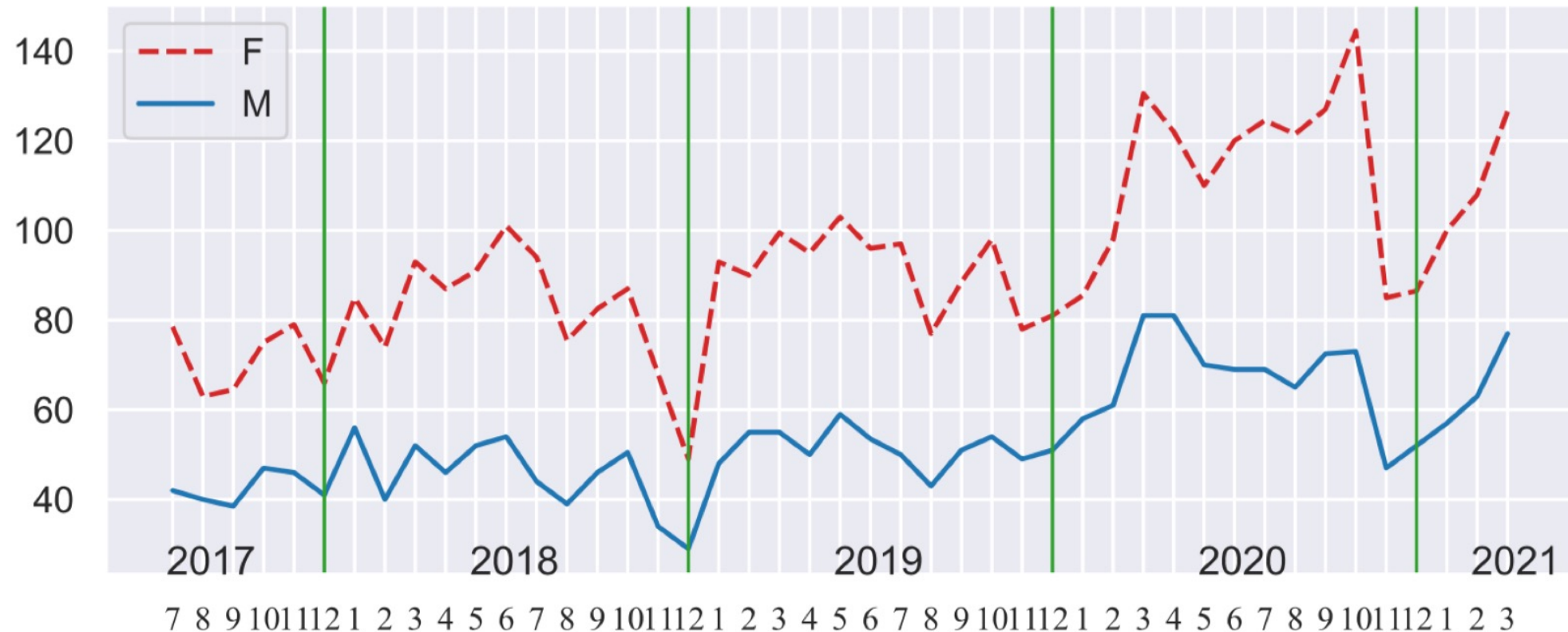
Performance of the fine-tuned BERT model

Self-promotion	Precision	Recall	F1	Support
no	0.948	0.951	0.950	3089
yes	0.834	0.825	0.829	914
accuracy			0.923	
macro average	0.891	0.888	0.890	

Model interpretation (by running LIME on 5000 tweets)

- Content words related to expressing self-promotion:
 - *bill, legislation, Tune, introduced, Act, proud, honored, bipartisan, joining, live*
- The context in which the above words occur:
 - *I am proud to introduce / cosponsor / support / vote for a [bipartisan] bill / legislation*
 - *Be sure to tune in / I'm live now / I'm hosting a virtual town hall*
 - *I'm honored to have received / earned / be recognized by*

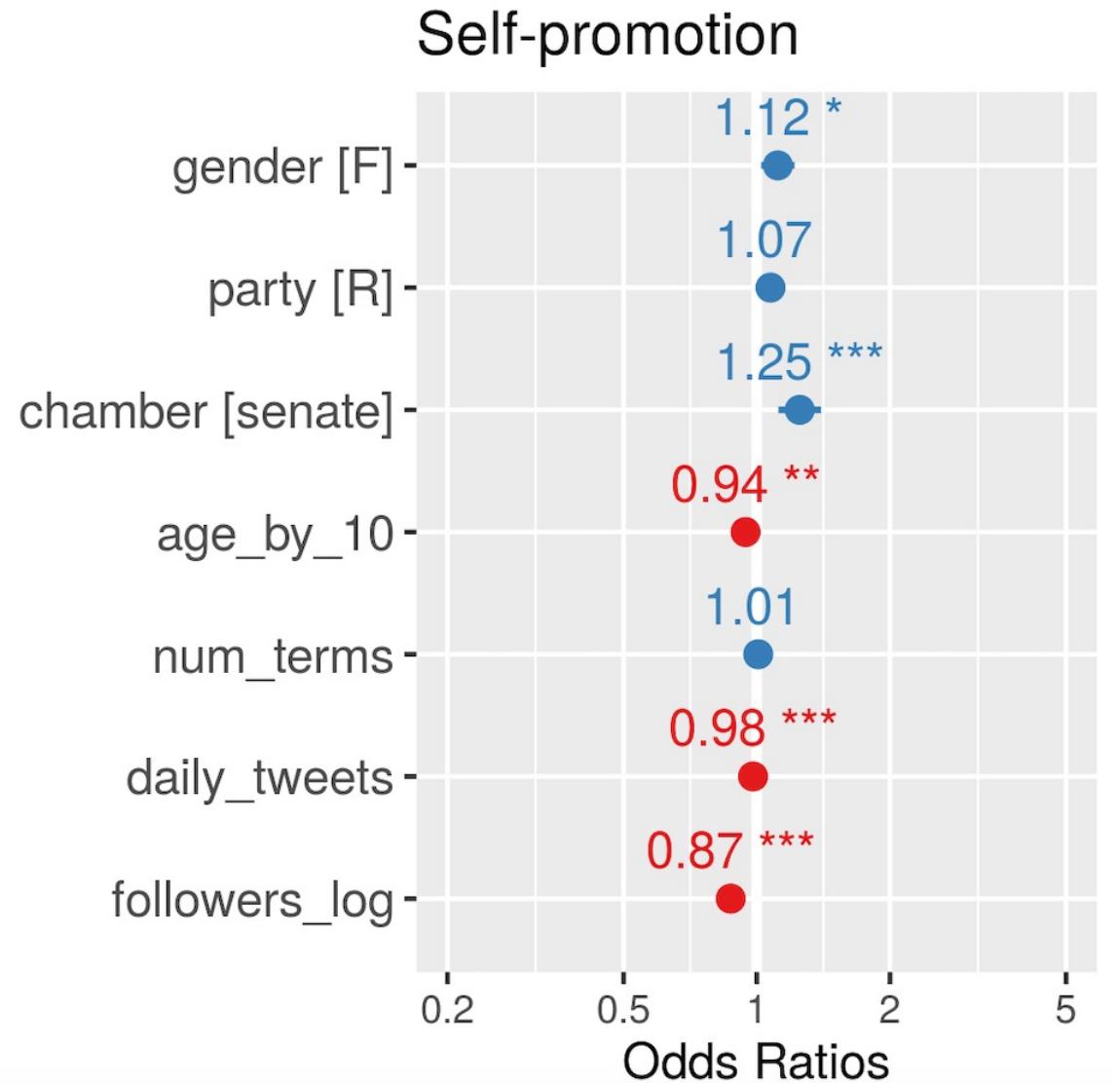
Apply the model to 2M Congressional tweets



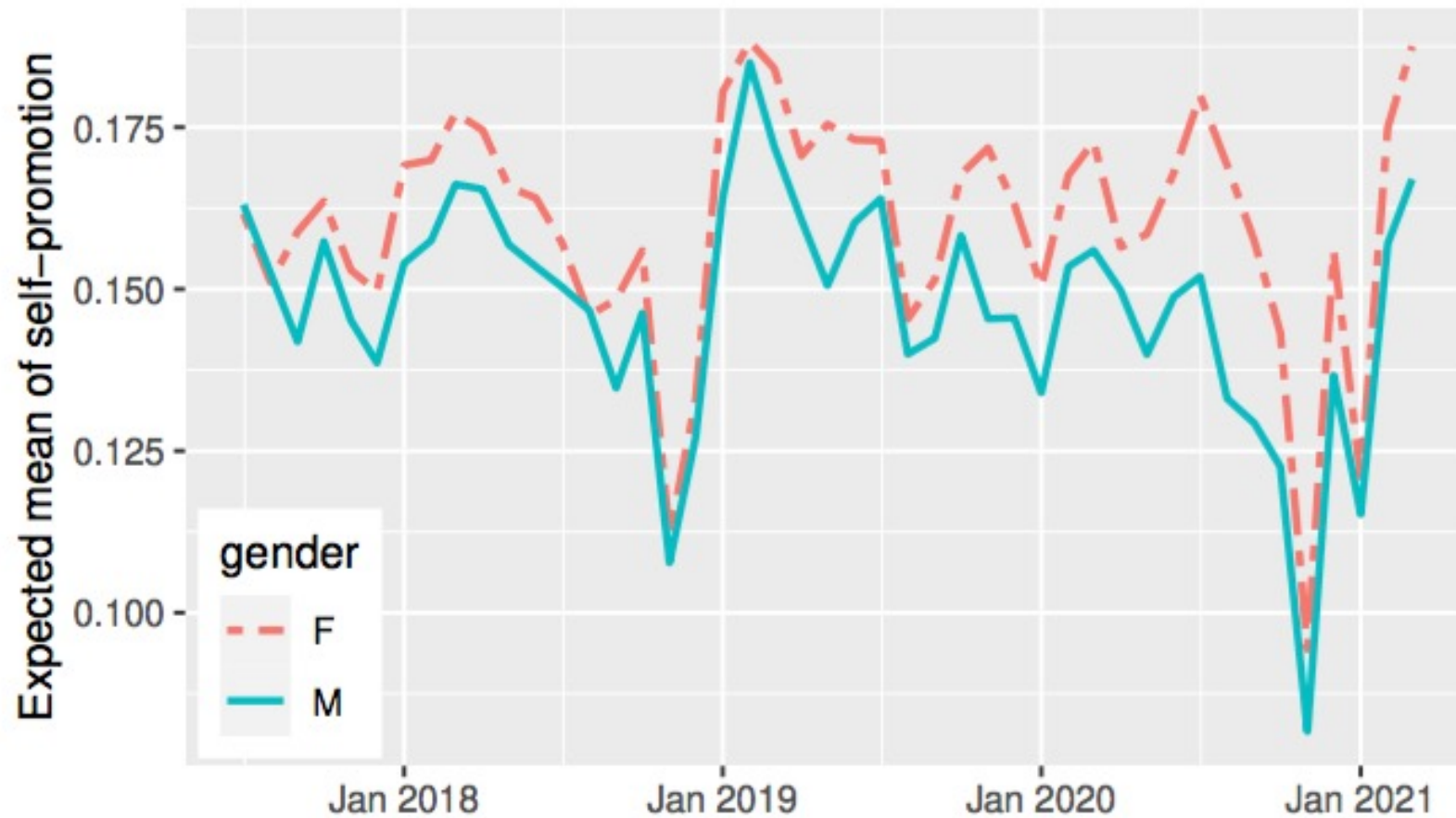
Median number of tweets posted each month by Congress women and men

Research result

Women Congress members
did more self-promotion on
Twitter



Women consistently performed more self-promotion than men



Appendix: Formula of the logistic linear mixed-effects regression model

```
self_promotion ~  
  gender          // M, F  
+ party          // D, R  
+ chamber        // house, senate  
+ age            // numerical  
+ num_terms      // numerical  
+ daily_tweets   // numerical  
+ followers_log  // numerical  
+ (1 | tweet_author) // random effect  
+ (1 | tweet_date)  // random effect
```

Distribution of Congress members of class 115, 116, and 117 across chamber, party, and gender.

	House			Senate			total
	D	R		D	R		
Female	105	39	(144)	19	10	(29)	173
Male	167	266	(433)	37	55	(92)	525
			(577)			(121)	698