



DIGITAL DEMOGRAPHY: ANALYZING WEB AND SOCIAL MEDIA DATA

WEBSCRAPING - DISCUSSION

EDSD DECEMBER 2024
TOM THEILE

DEPARTEMENT OF DIGITAL AND
COMPUTATIONAL DEMOGRAPHY



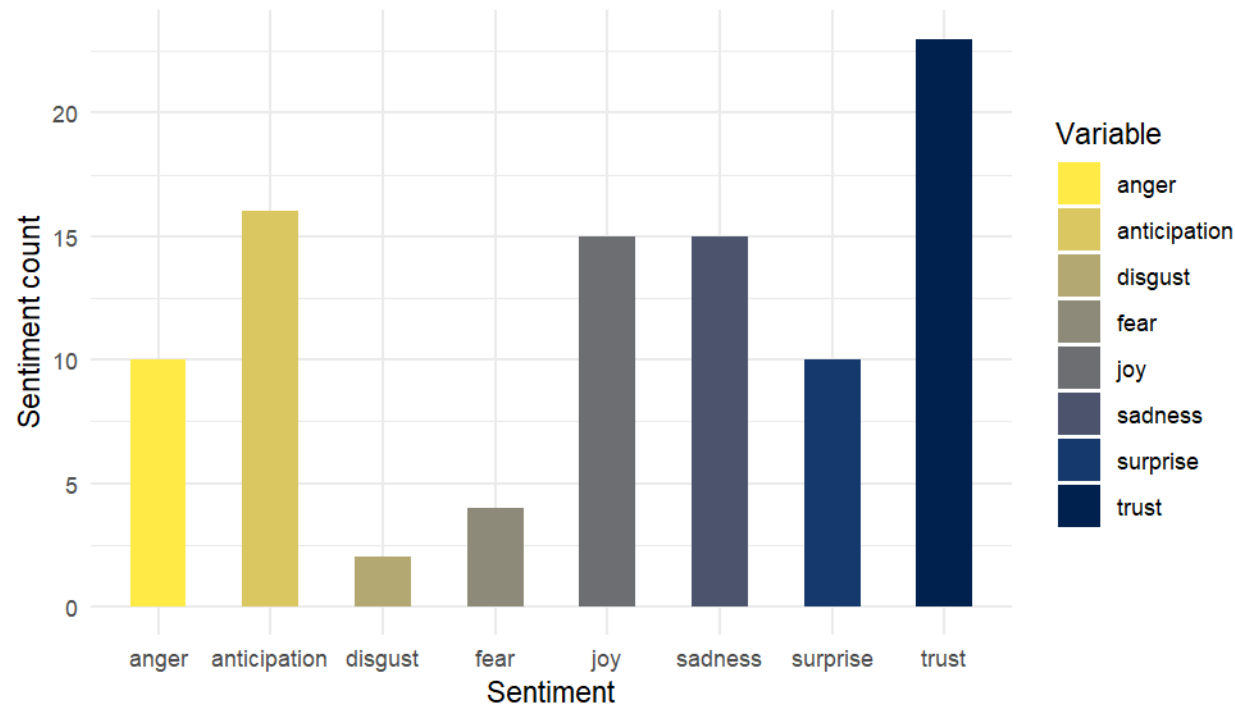
PART 2: HOW TO SCRAPE DATA FROM WEBSITES?

Your Plots!

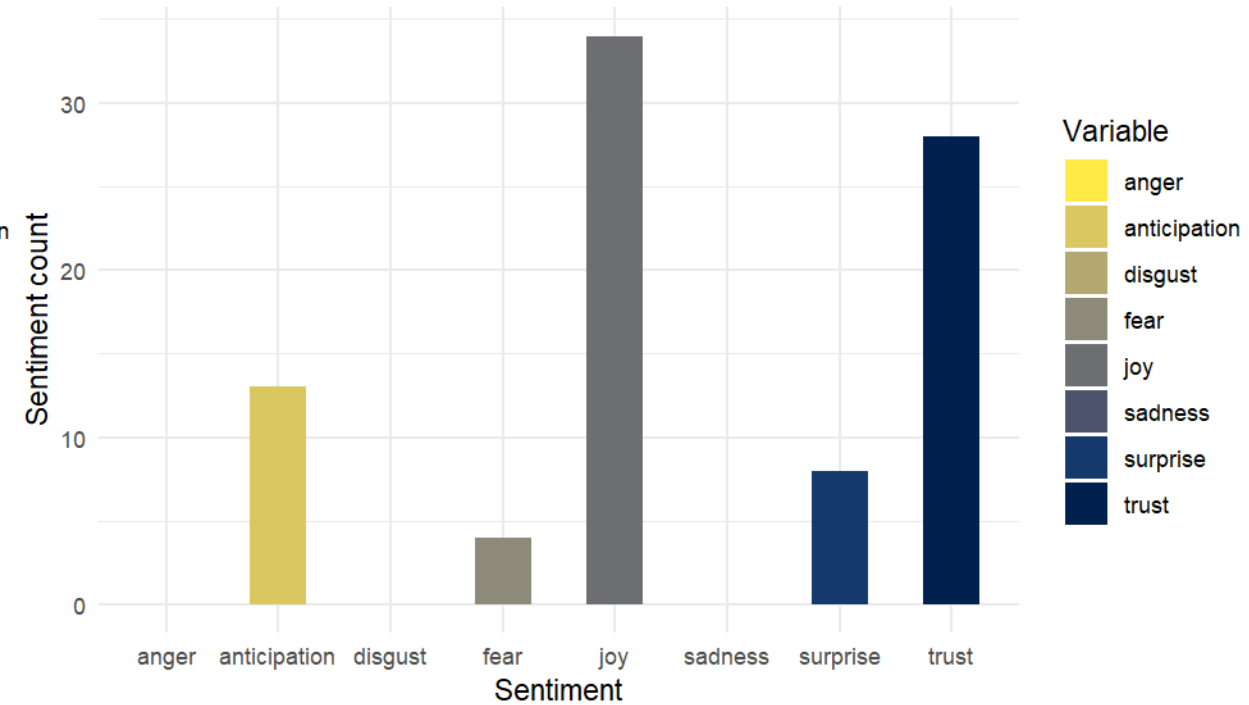
By Elder Lara

HEADLINE DATA

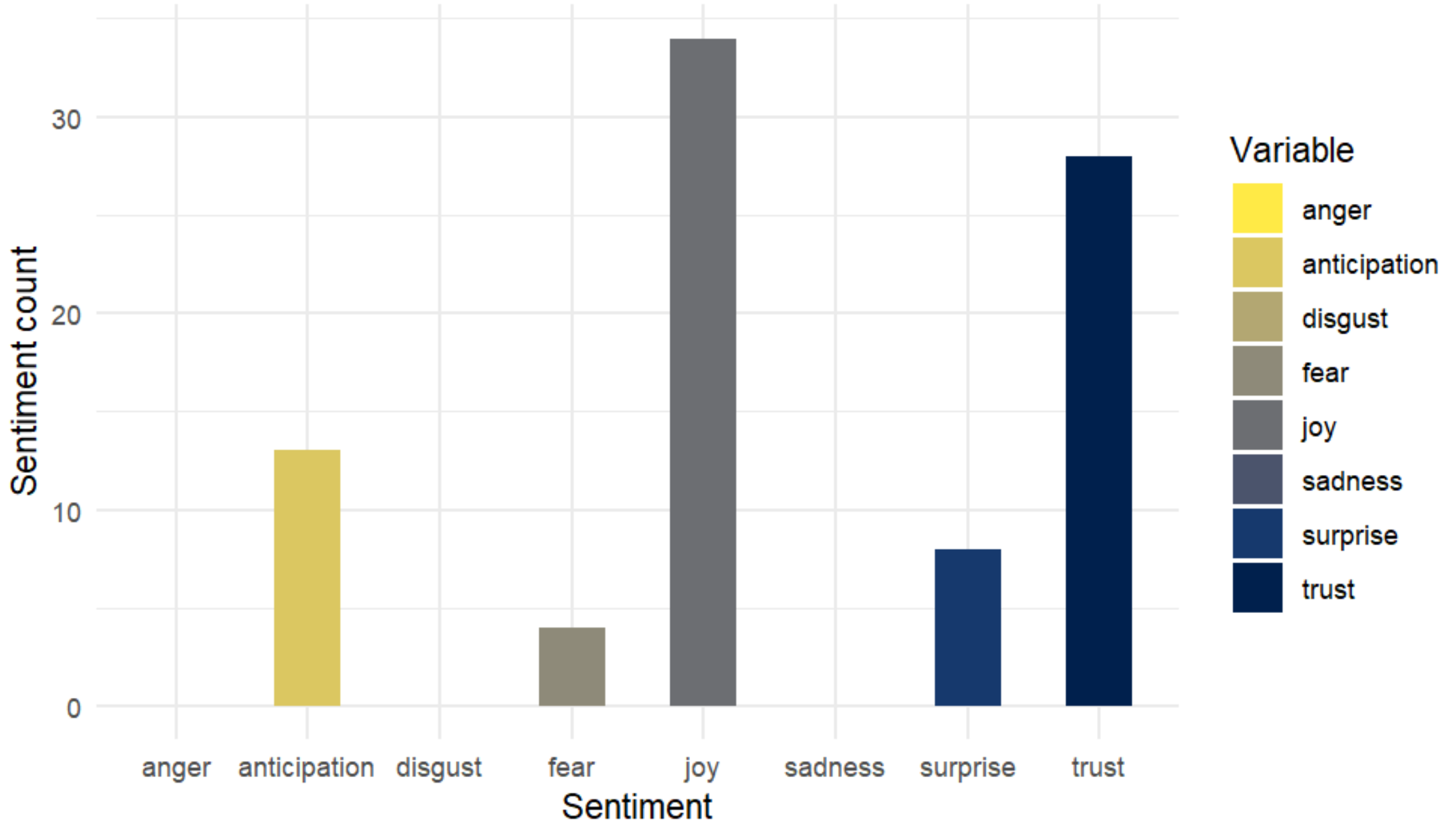
Occurrence of sentiments in Sports news



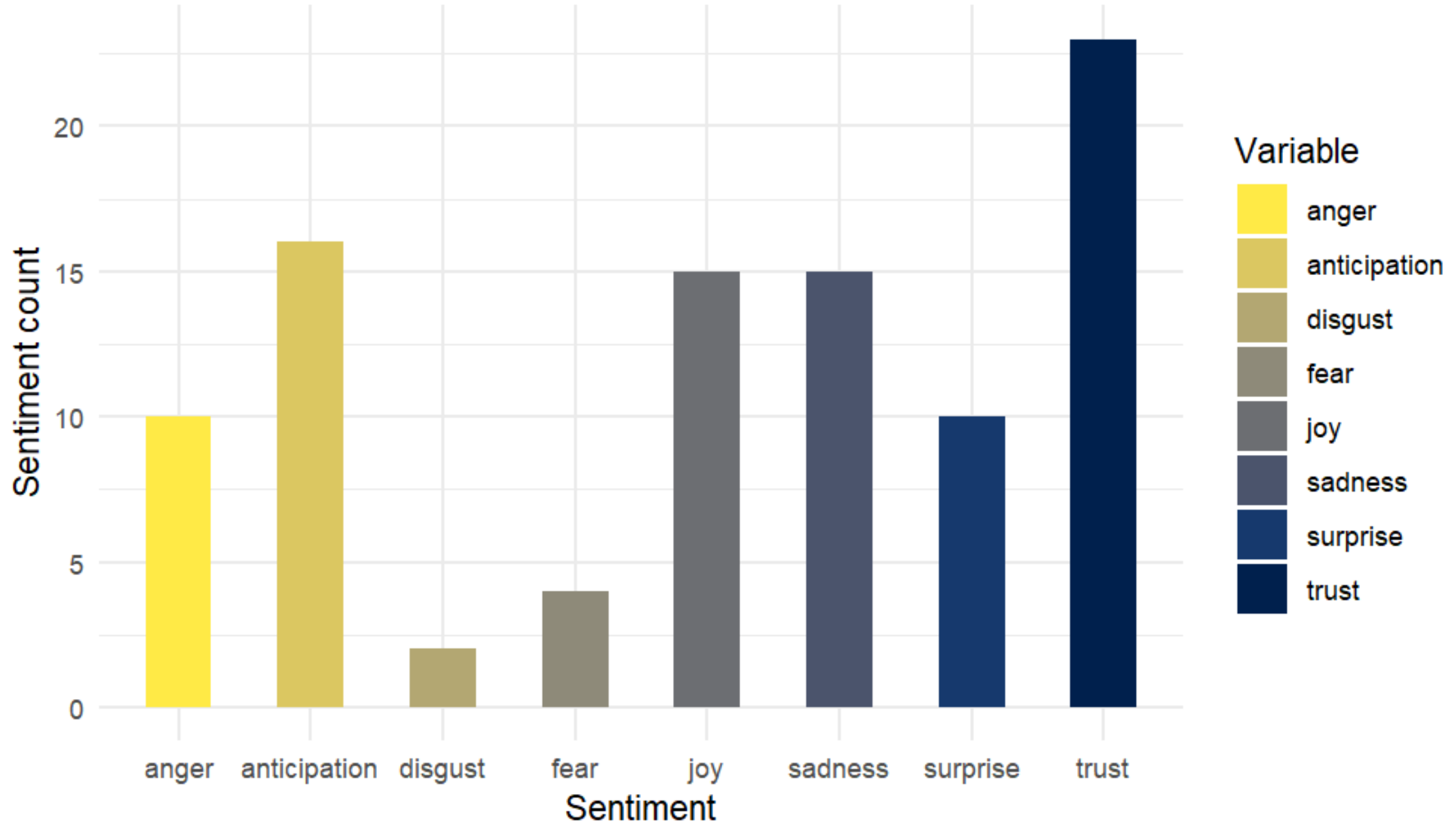
Occurrence of sentiments in Food news



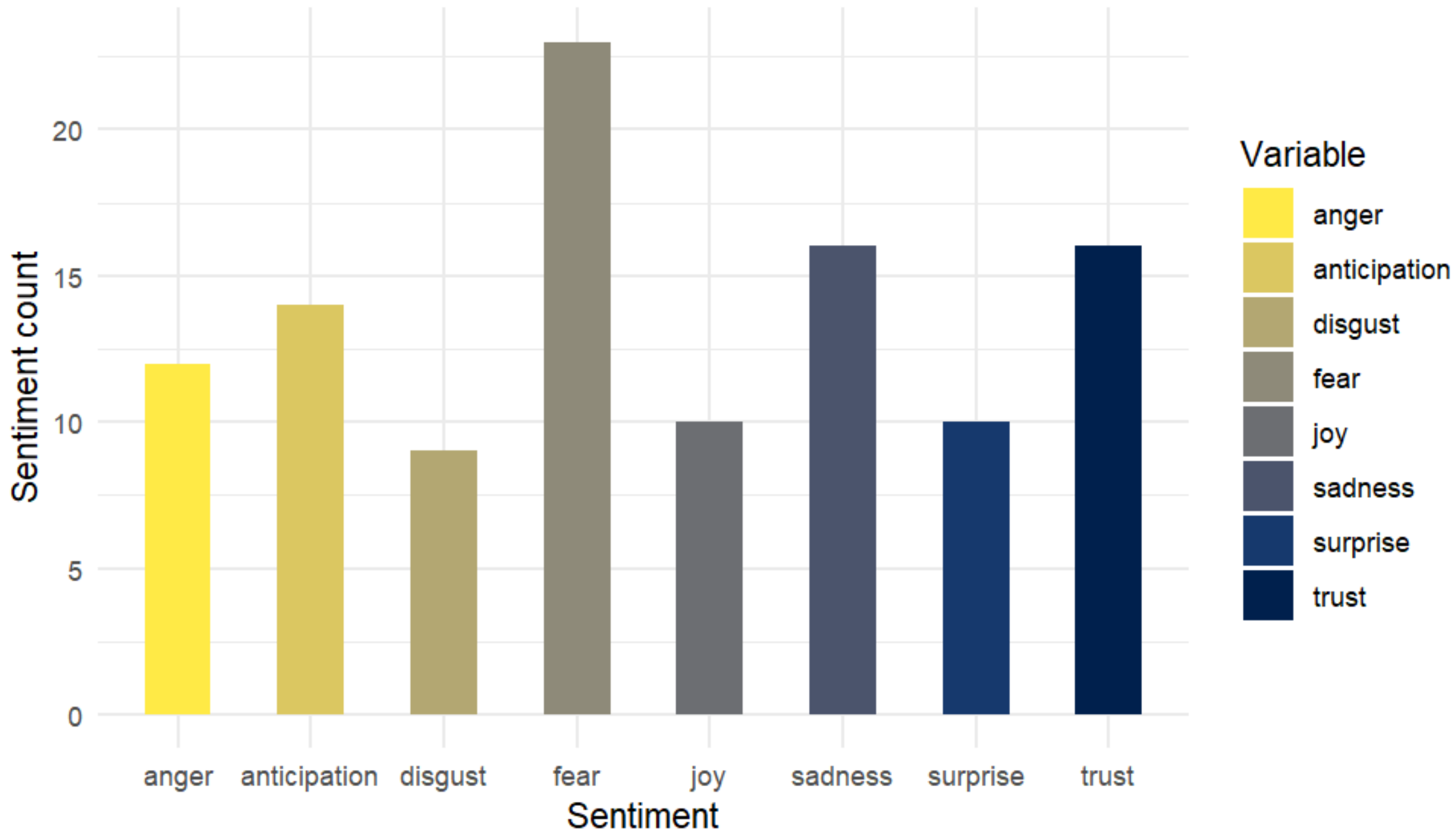
Occurrence of sentiments in Food news



Occurrence of sentiments in Sports news

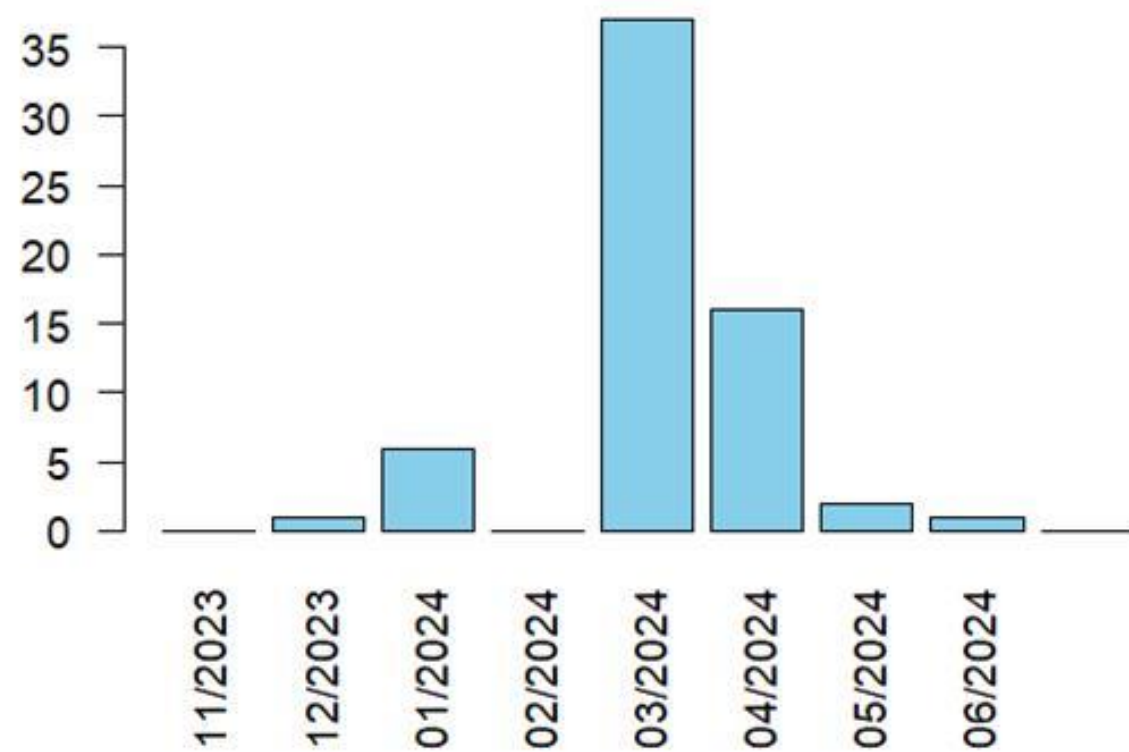


Occurrence of sentiments in Opinion news

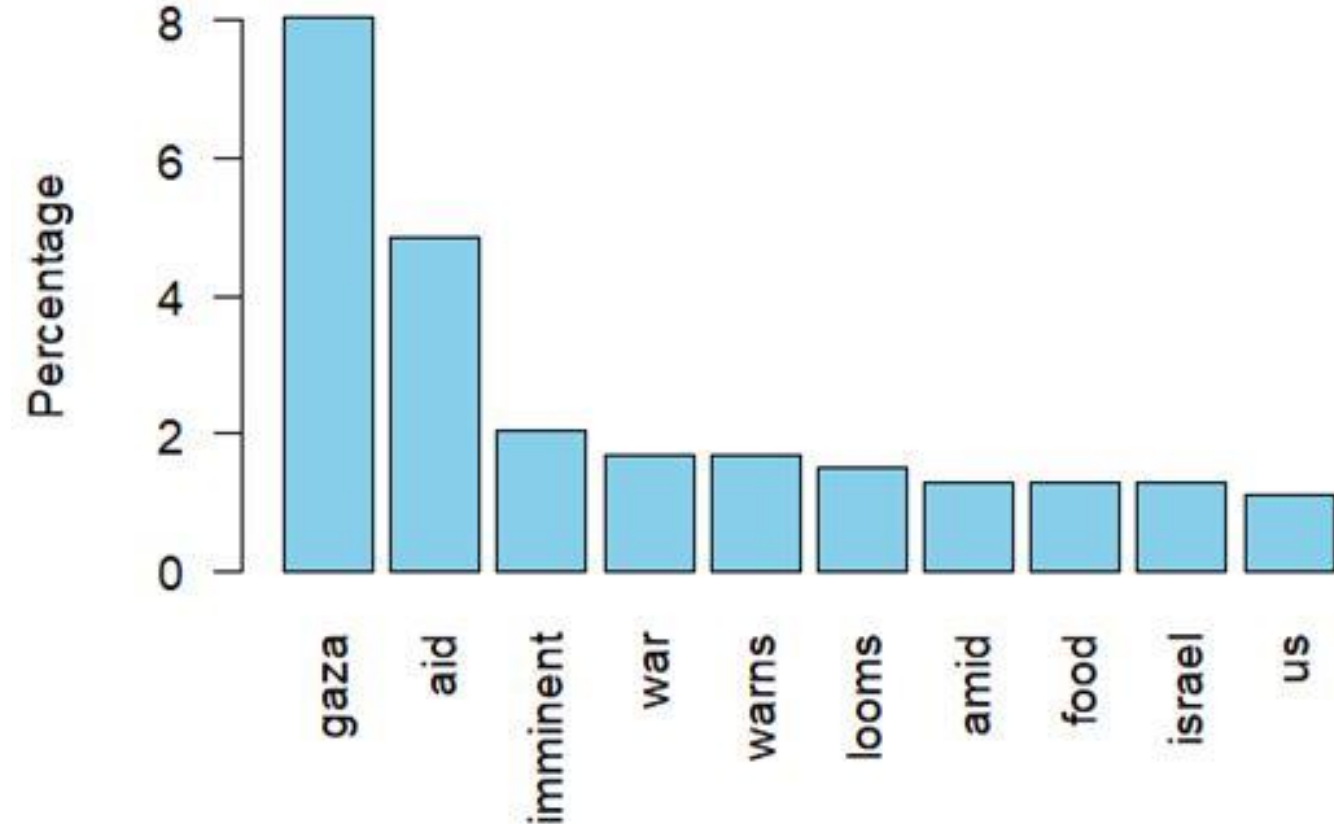


HEADLINE DATA

Number of news headlines containing 'famine'



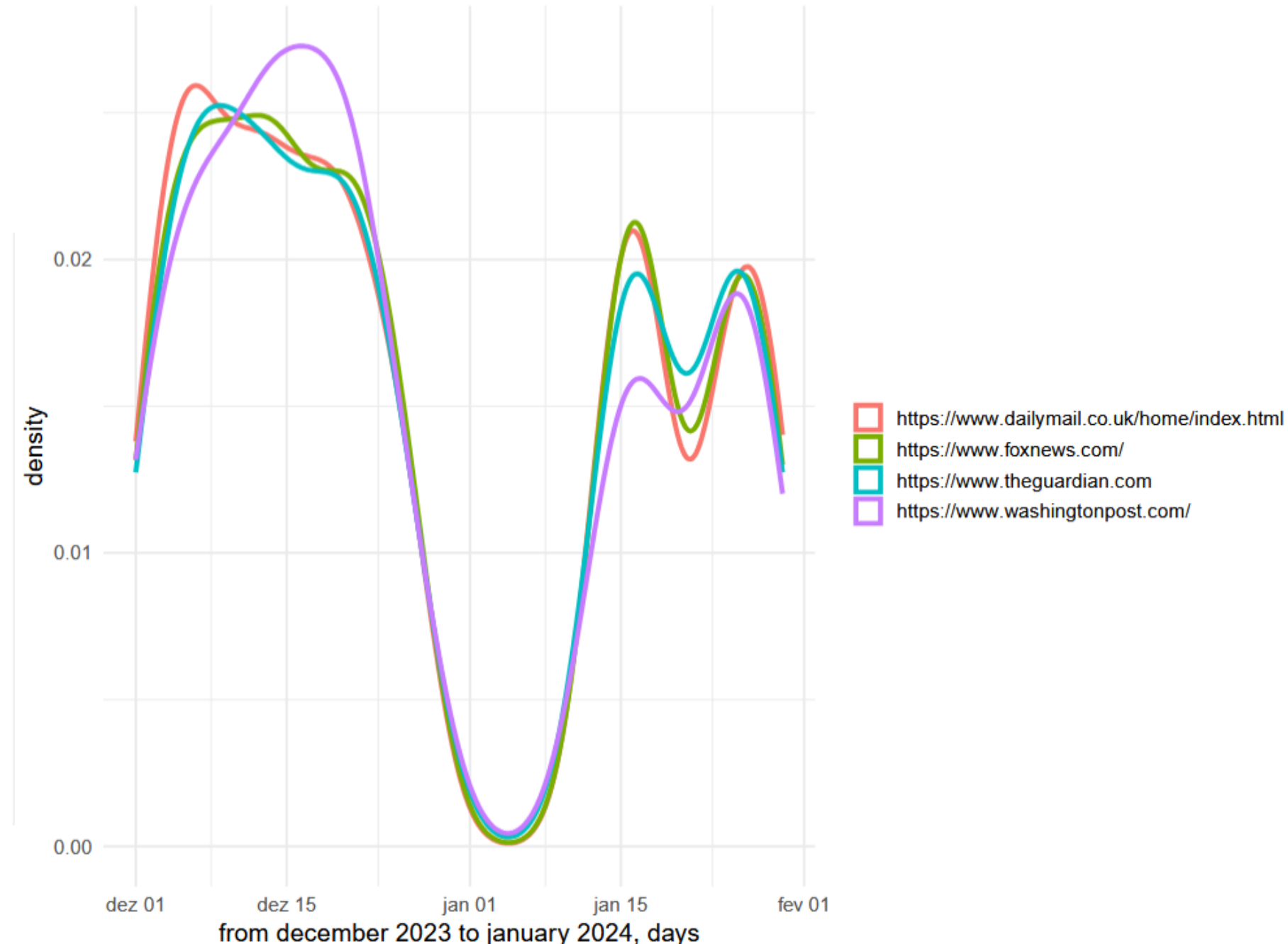
Frequently associated words to 'famine' (%)



Distribution of 'anticipation' between december 2023 and january 2024



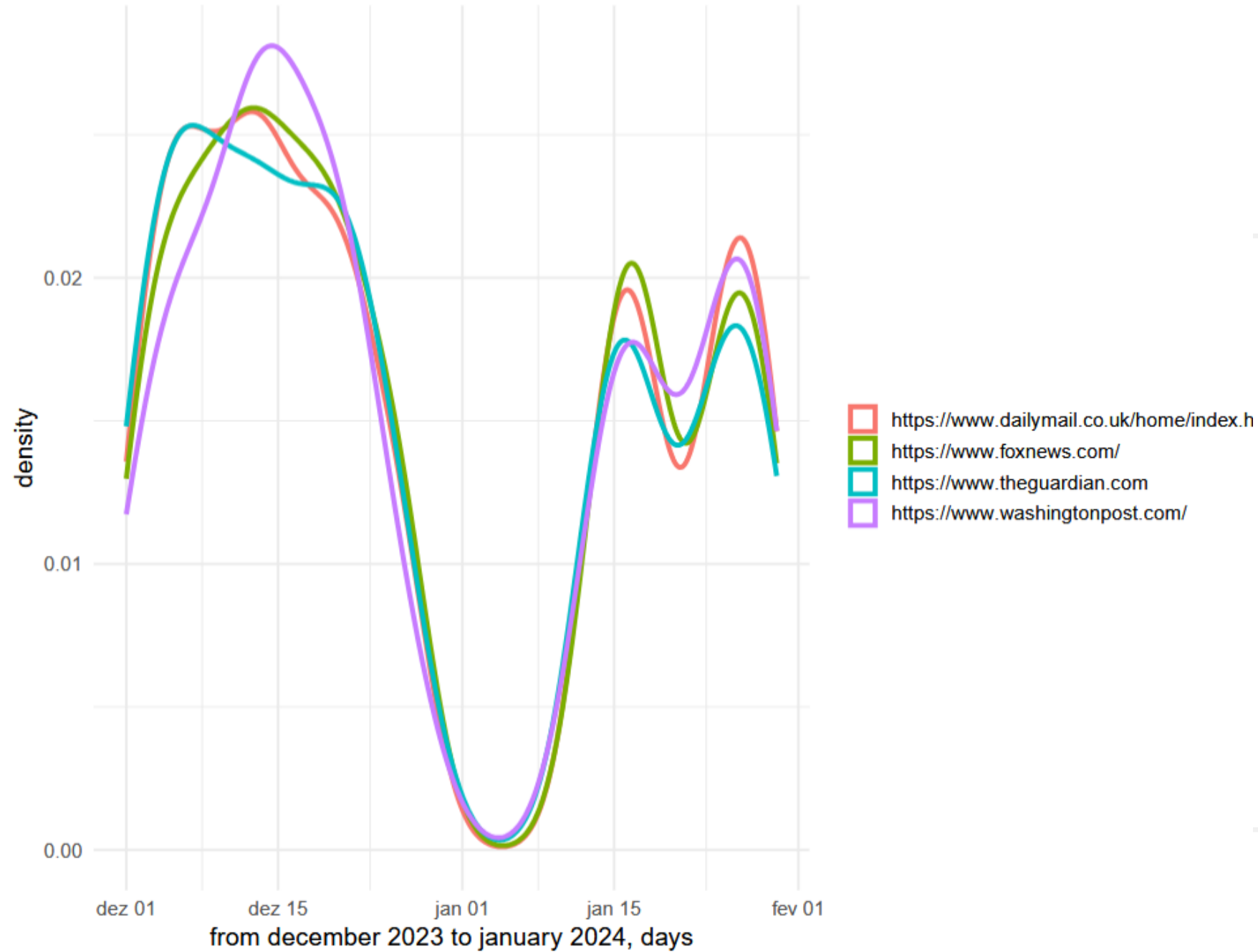
By João Victor Antunes Lopes



Distribution of 'sadness' between december 2023 and january 2024



By João Victor Antunes Lopes



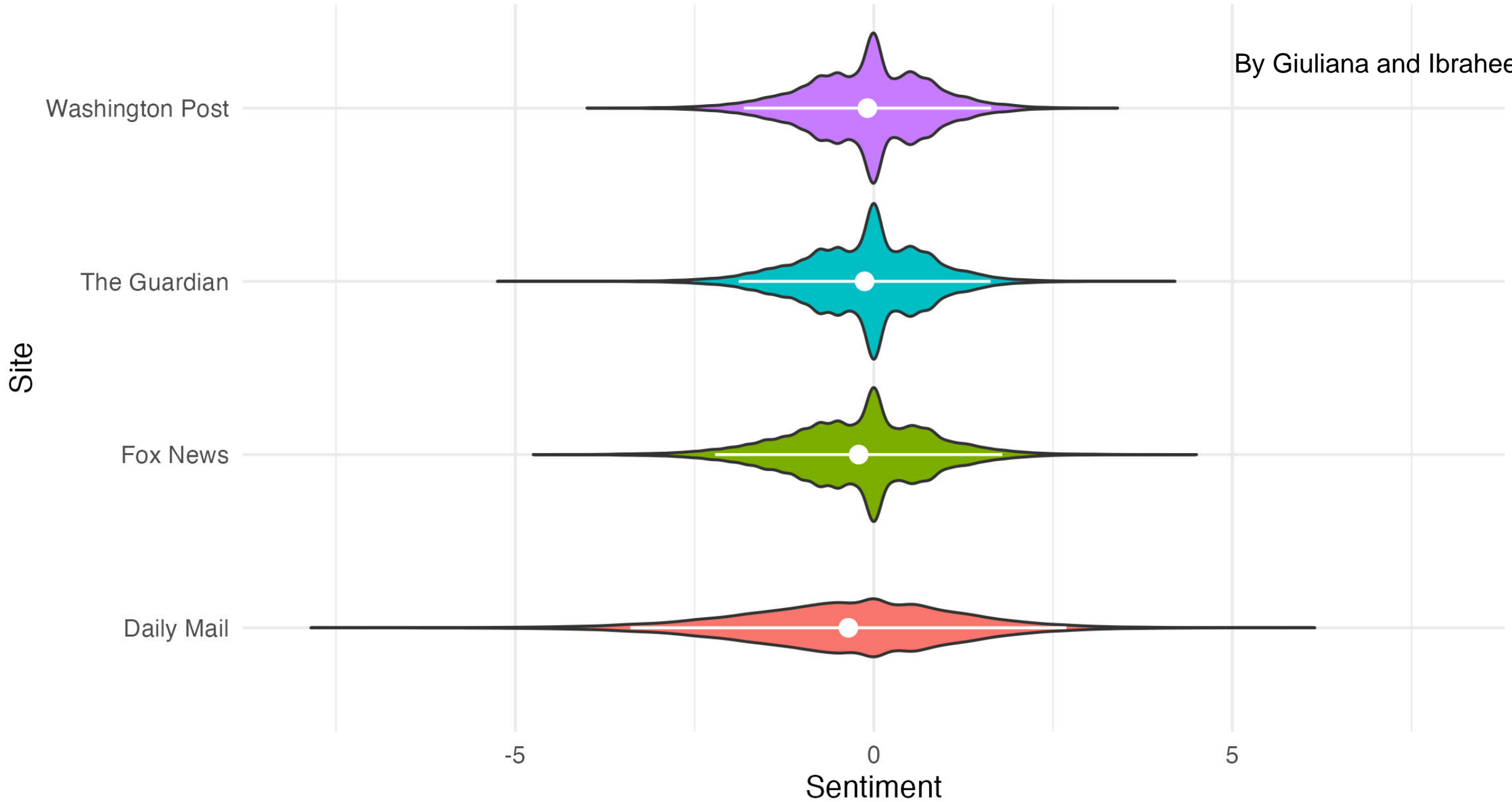
HEADLINE DATA

By

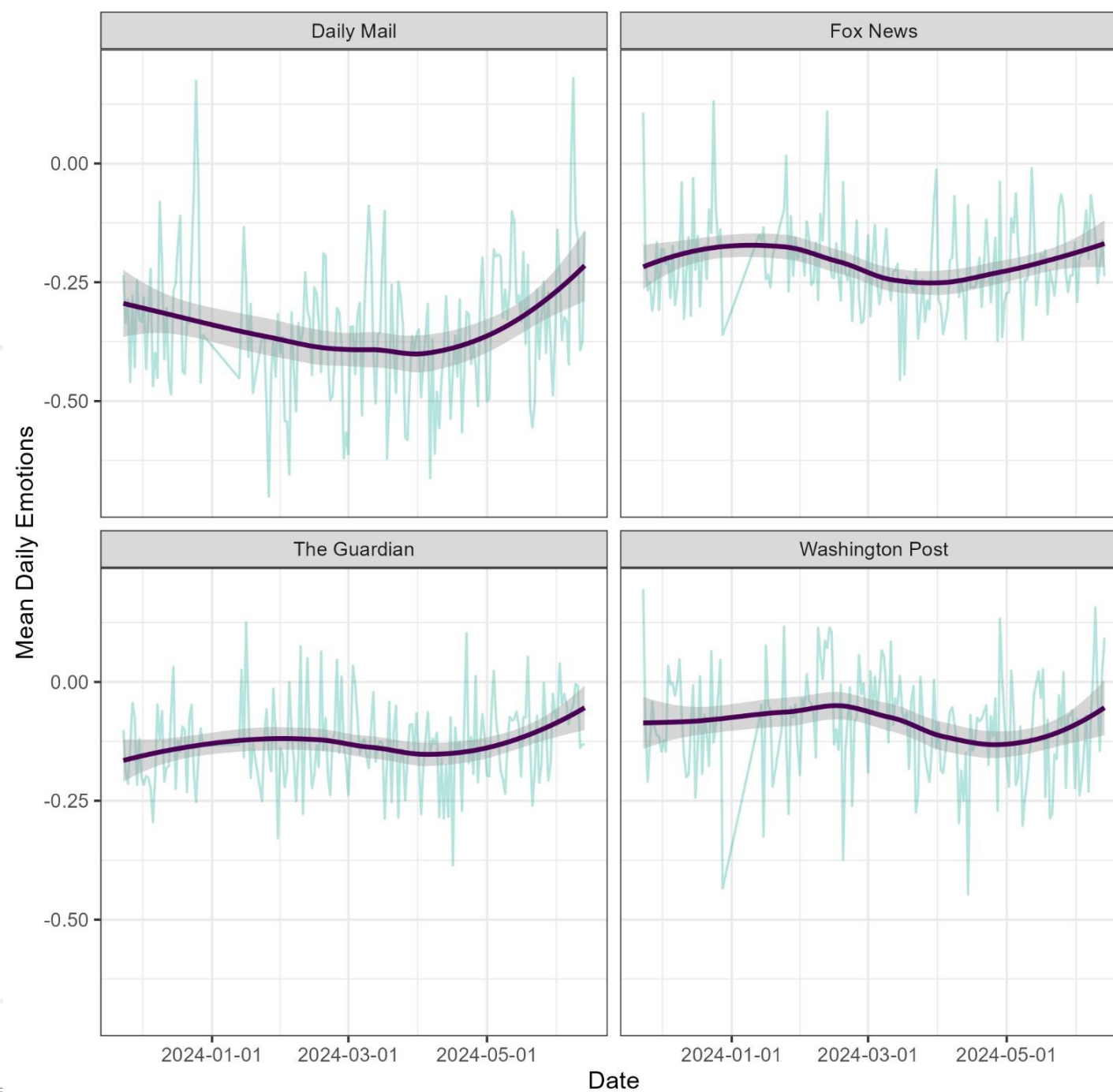
MORE??

Sentiment of Articles Posted on Various News Sites

By Giuliana and Ibraheem

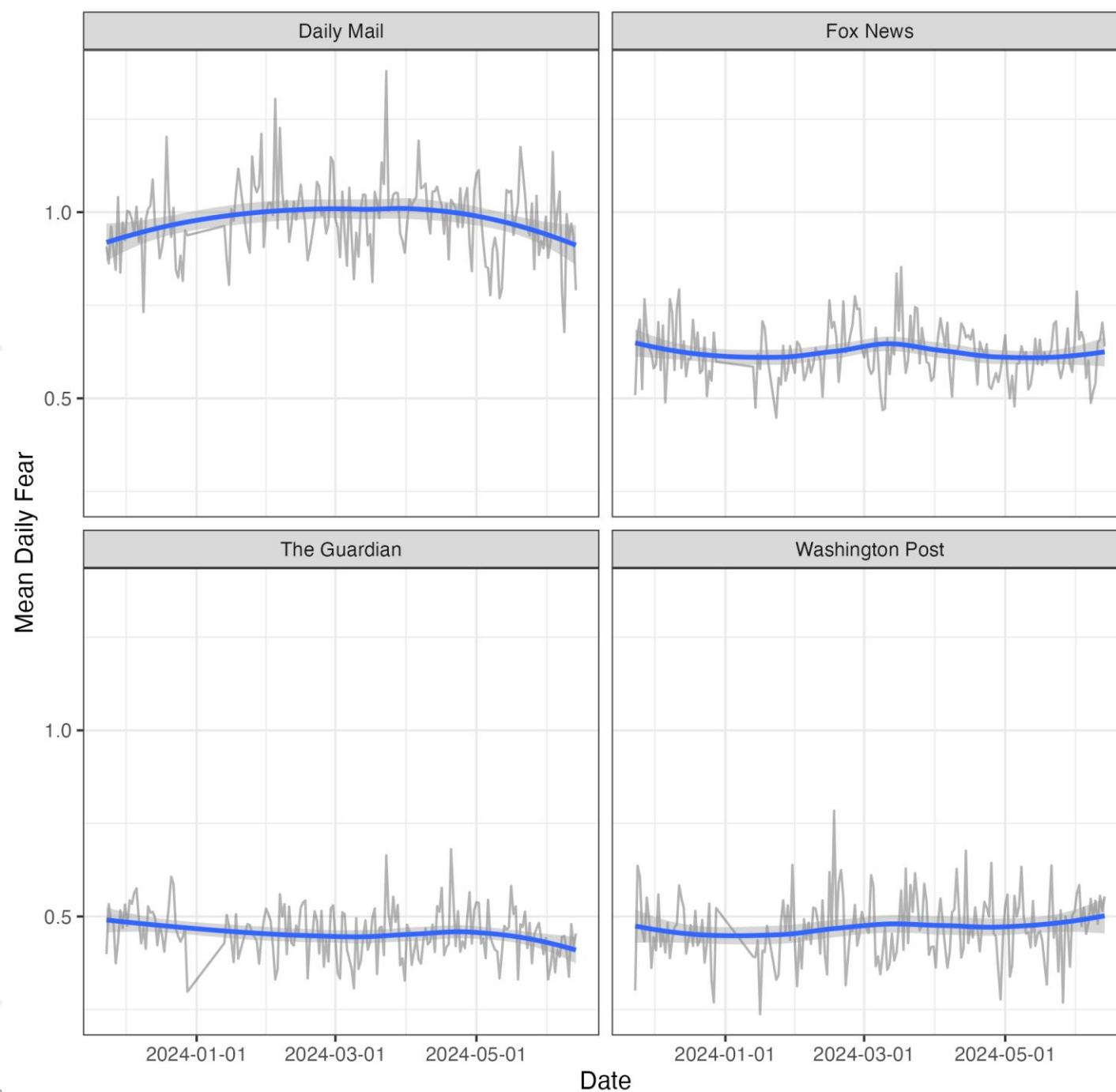


By Laura and Emile

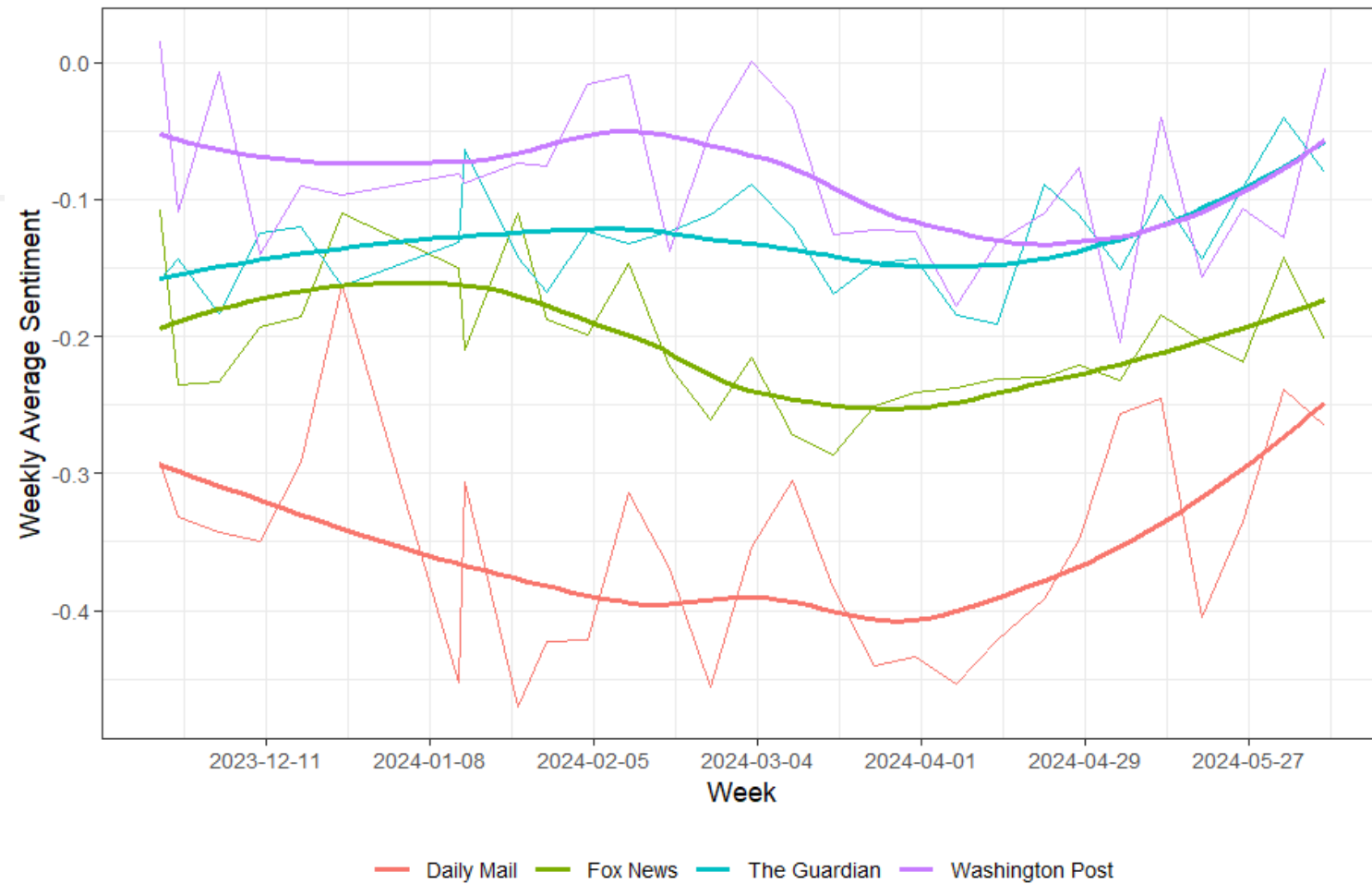




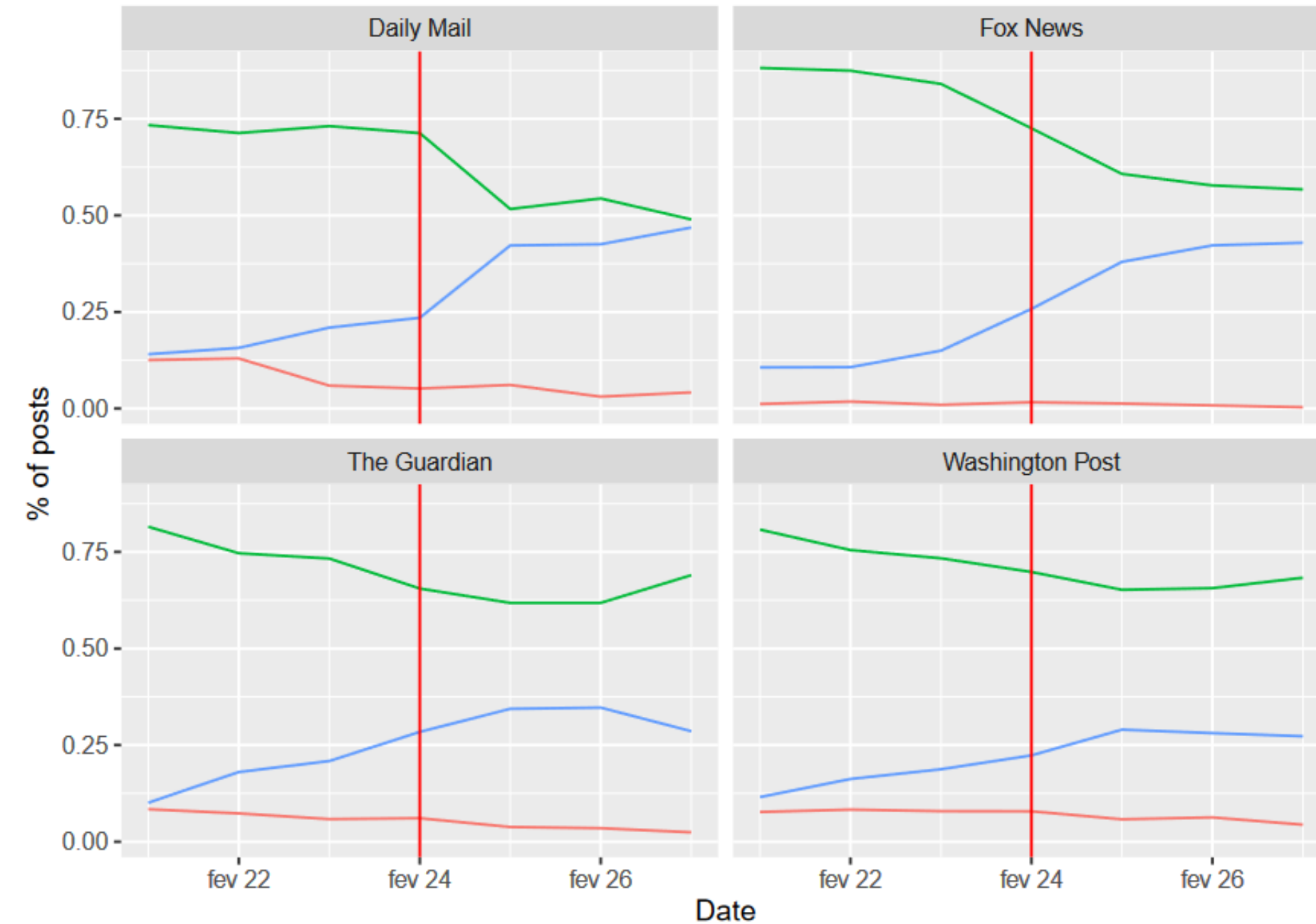
By Laura and Emile



By Laura and Emile



By Maria Laura Lopes
Miranda

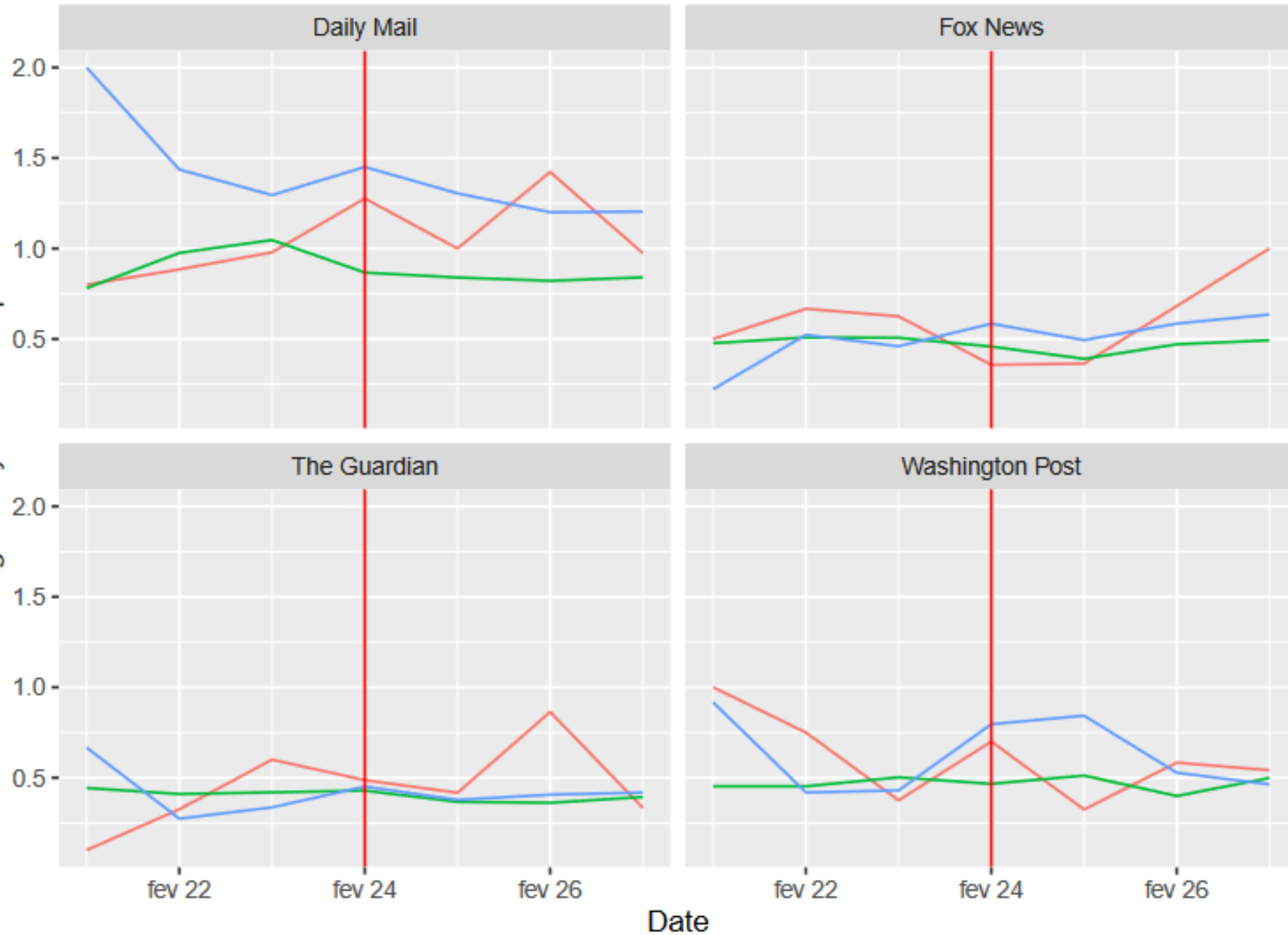


Topic

- Covid
- Others
- War

By Maria Laura Lopes
Miranda

Fear weighted by number of posts



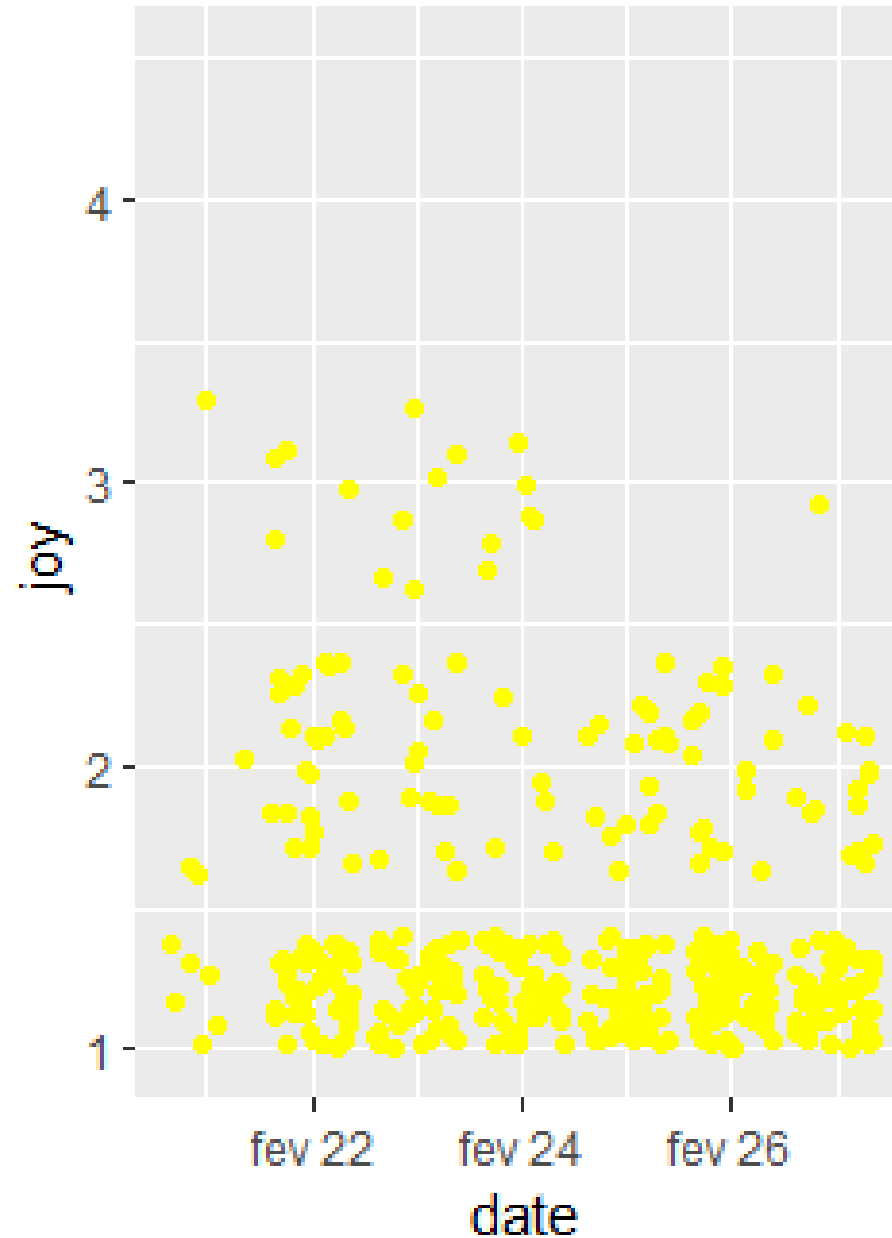
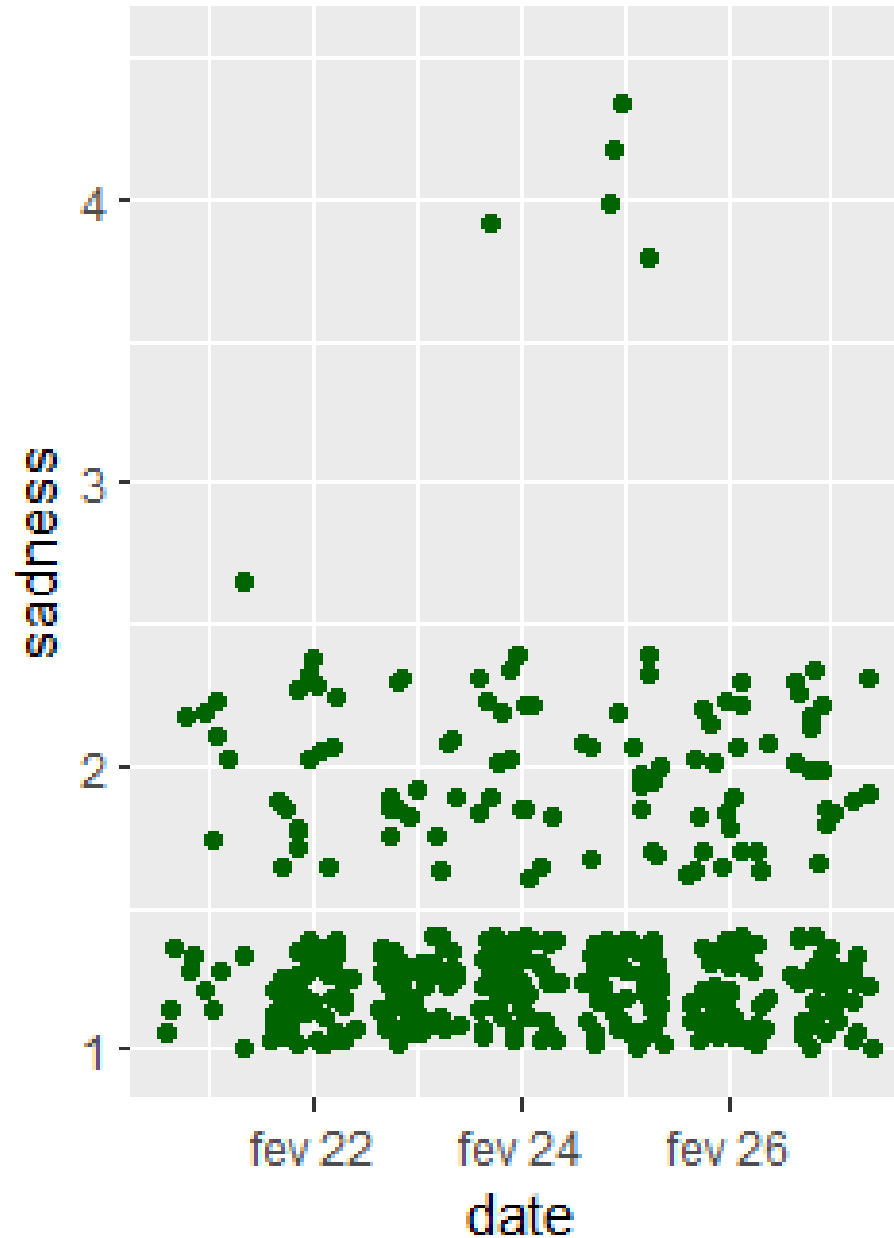
Topic

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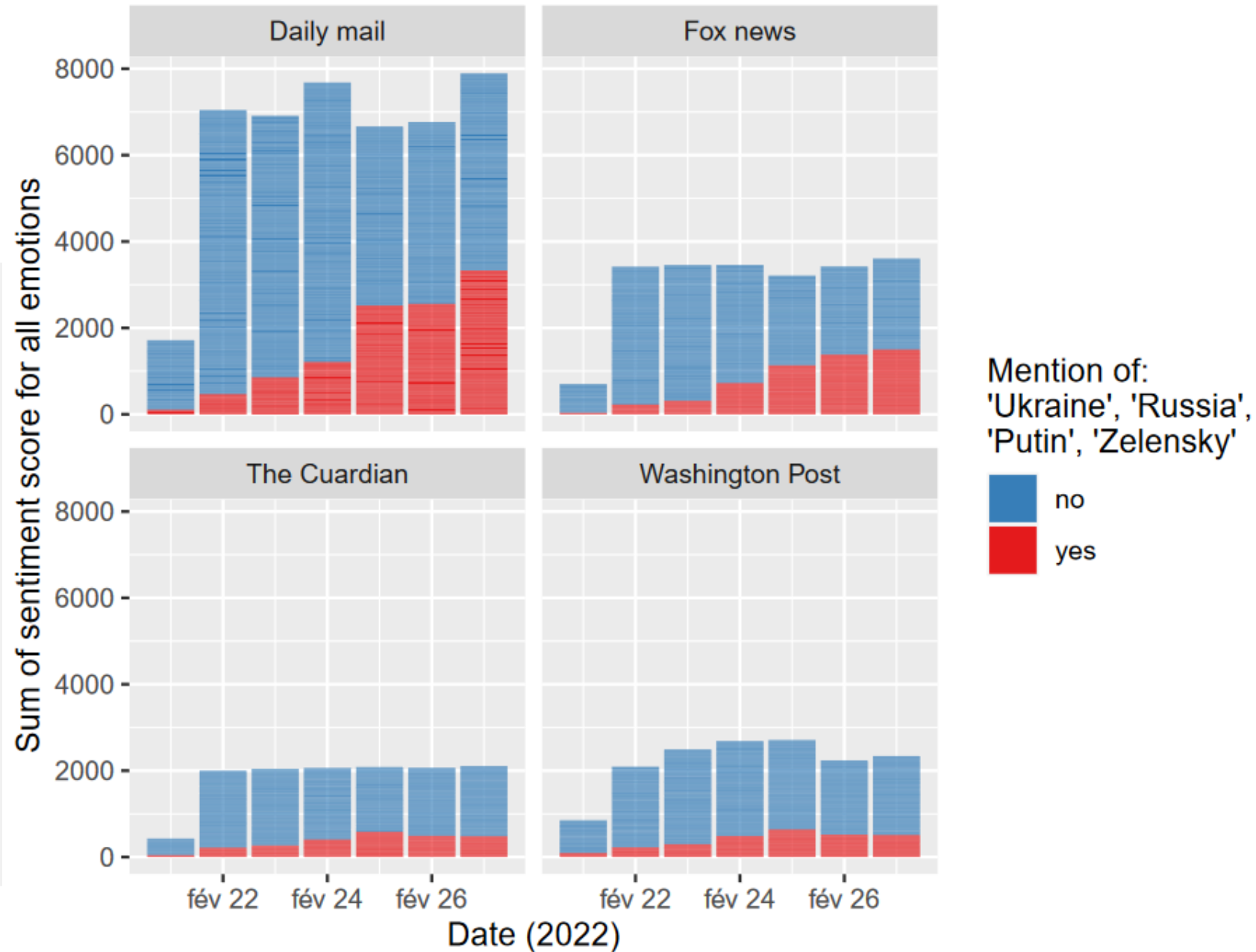
Sentimental Analysis about Brazil in The Guardian



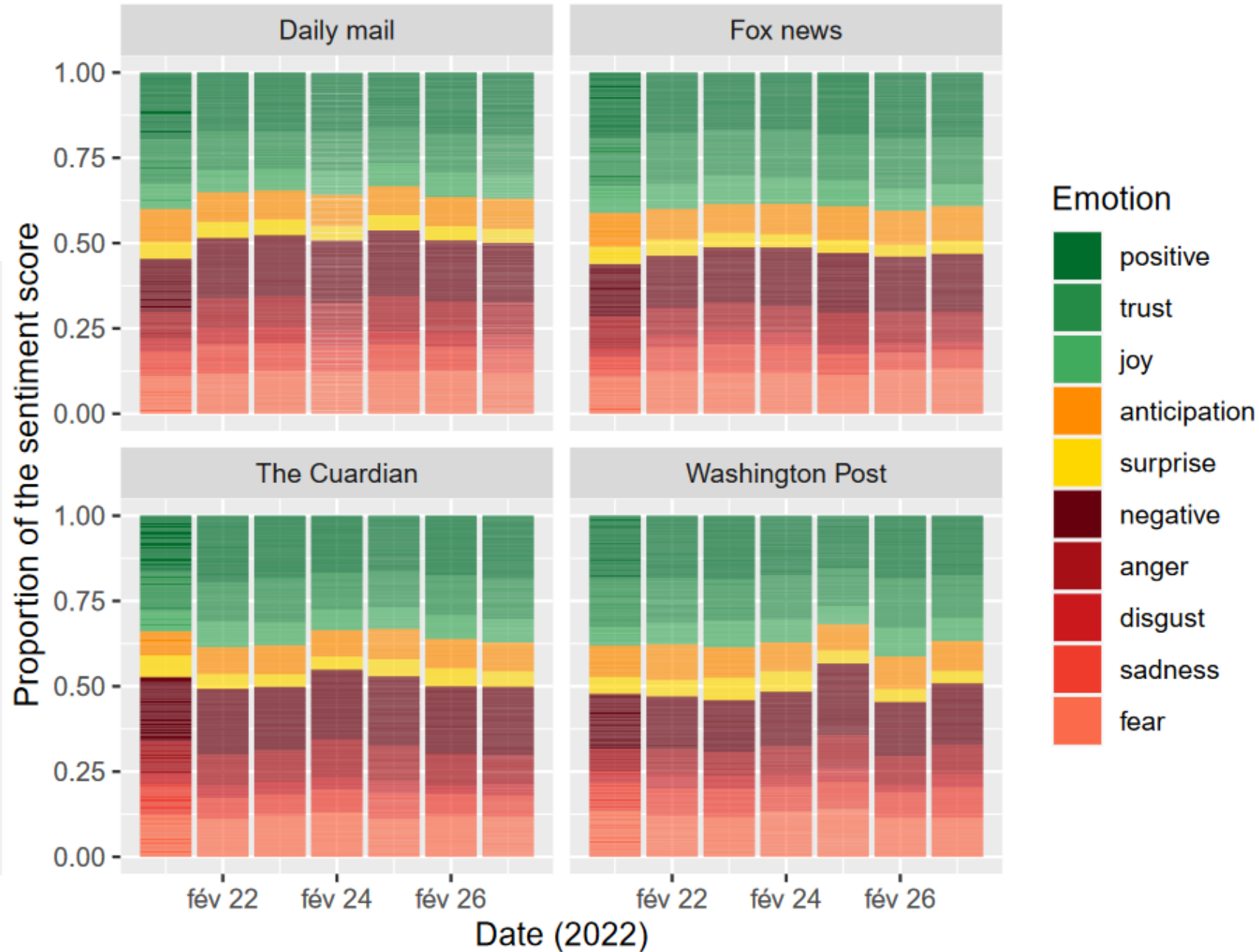
By Amanda
Martins de Almeida



Evolution of the sentiment score during the invasion of Ukraine

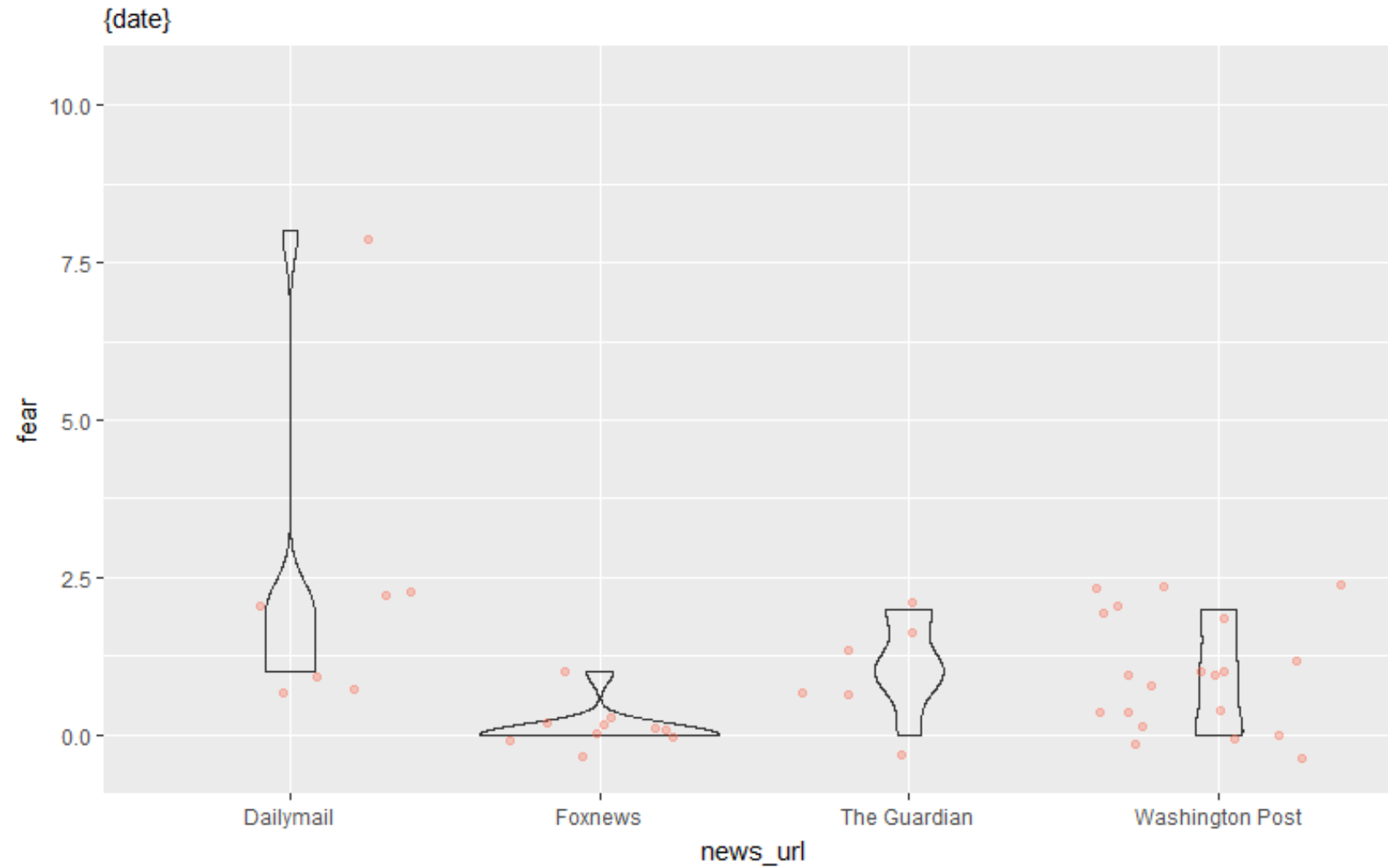


Evolution of the nature emotions expressed in the title



YOUR PLOTS

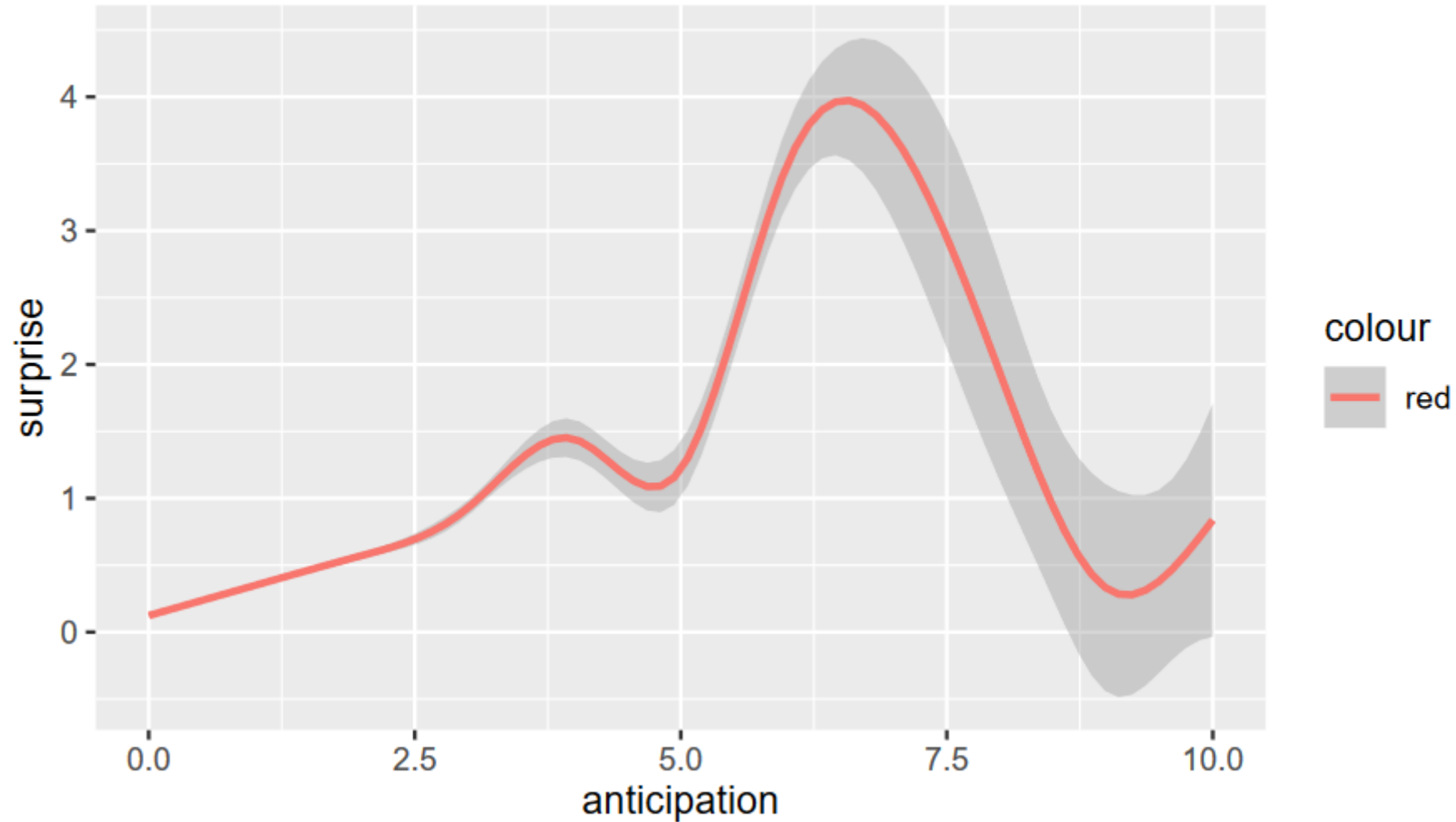
- Plots by Clara Girault



YOUR PLOTS

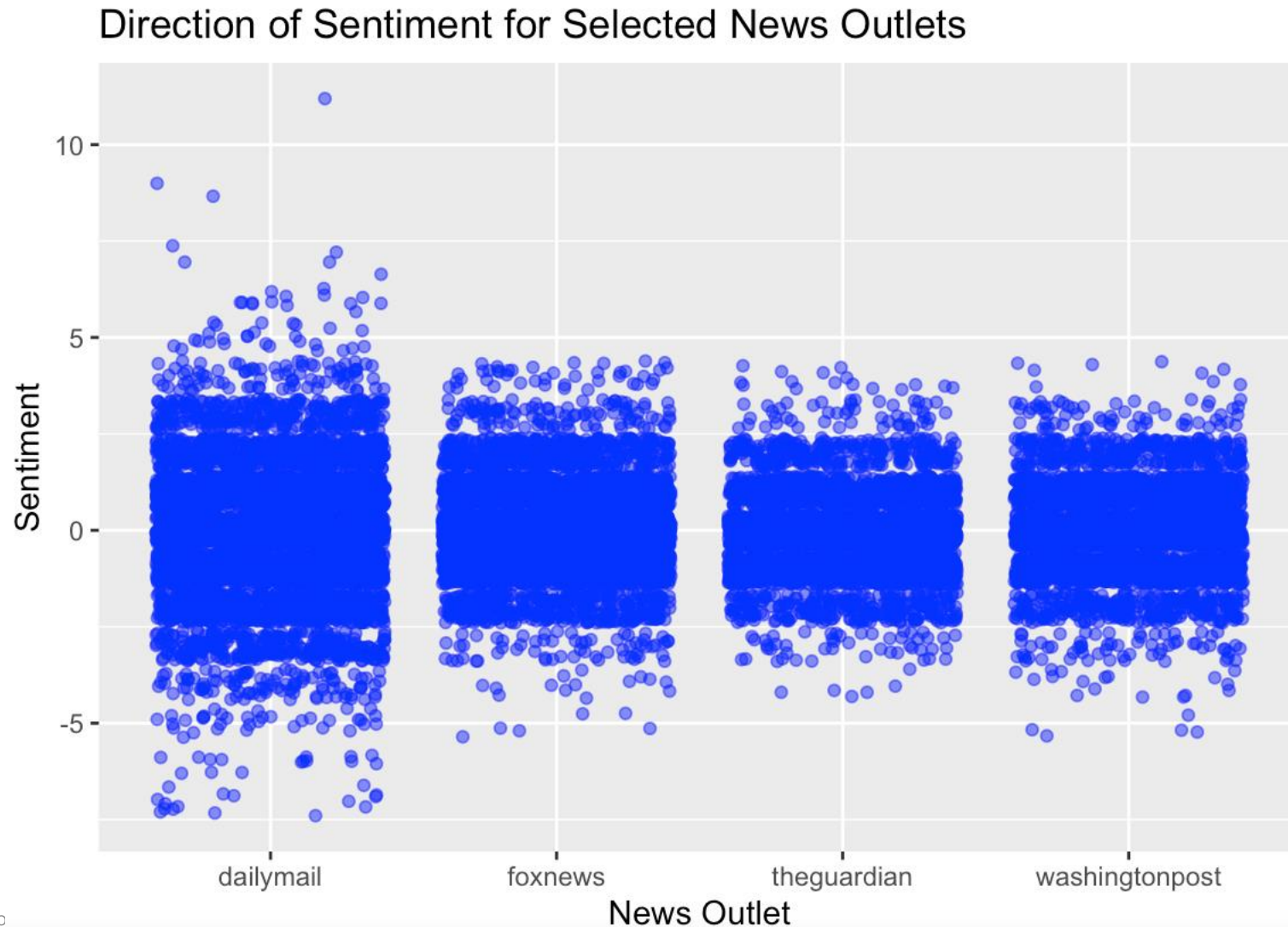
- Plots by Philip Orlaade

The relationship between anticipation and surprise in washingtonpos



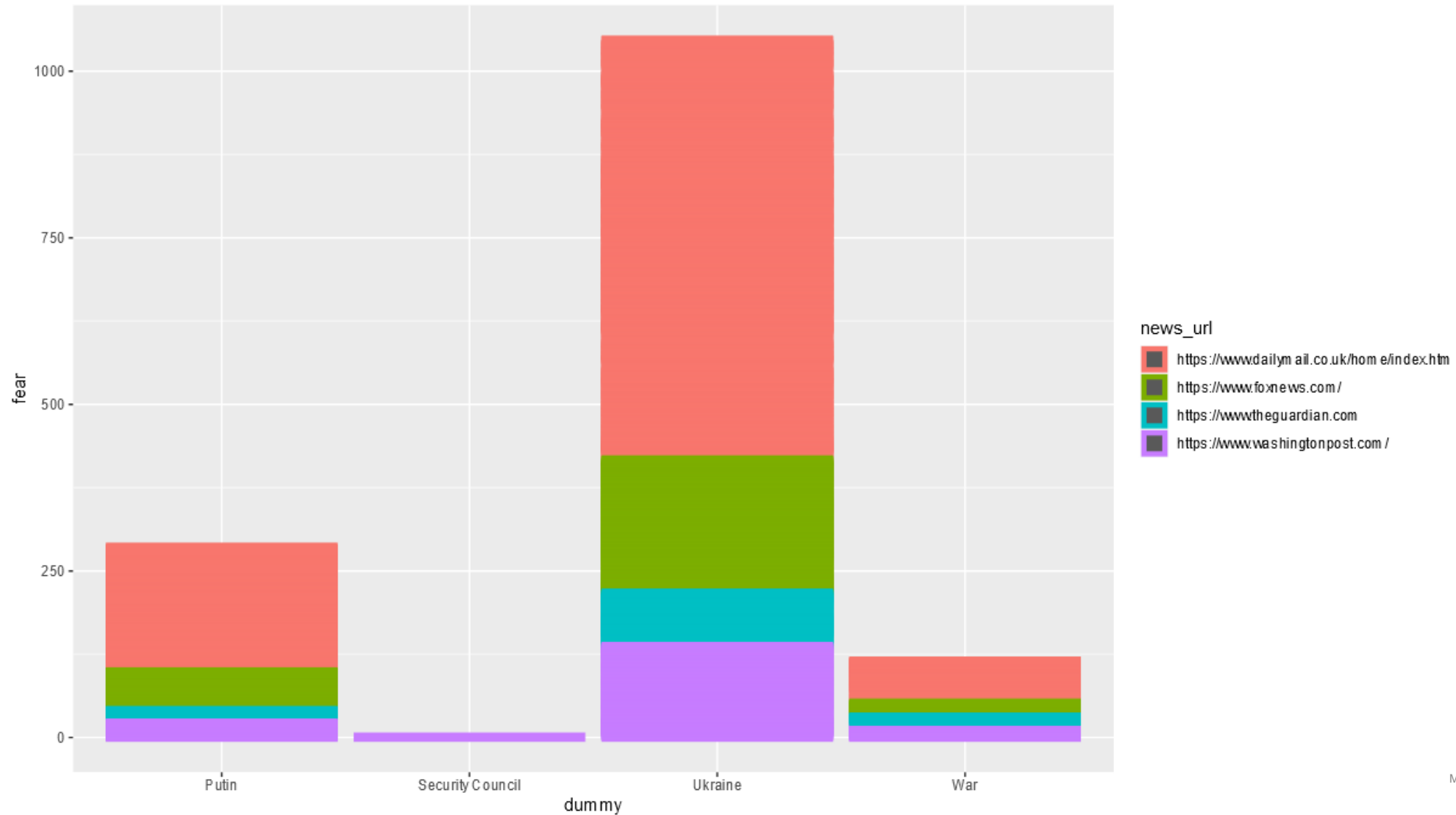
YOUR PLOTS

- Plots by Maria Louisa Christine Pohl



YOUR PLOTS

- Plots by Óskar Daði Jóhannsson

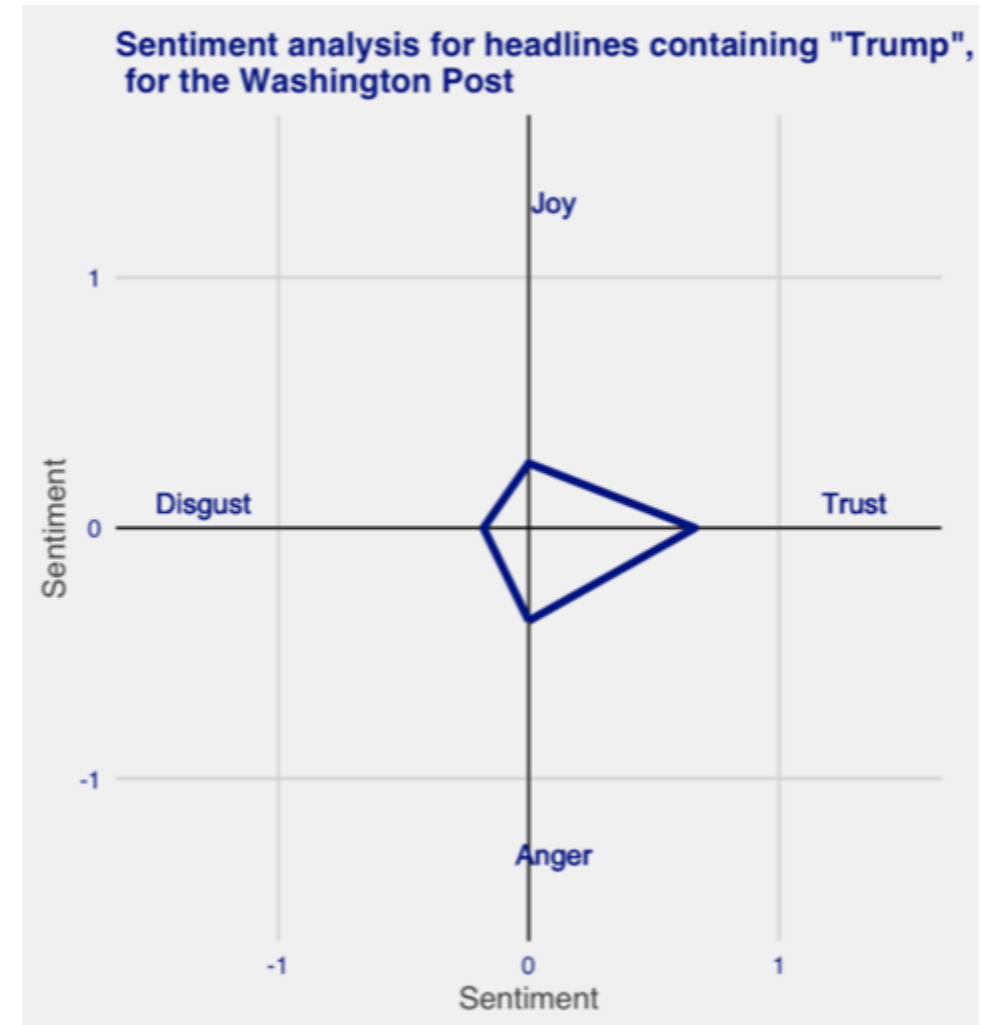
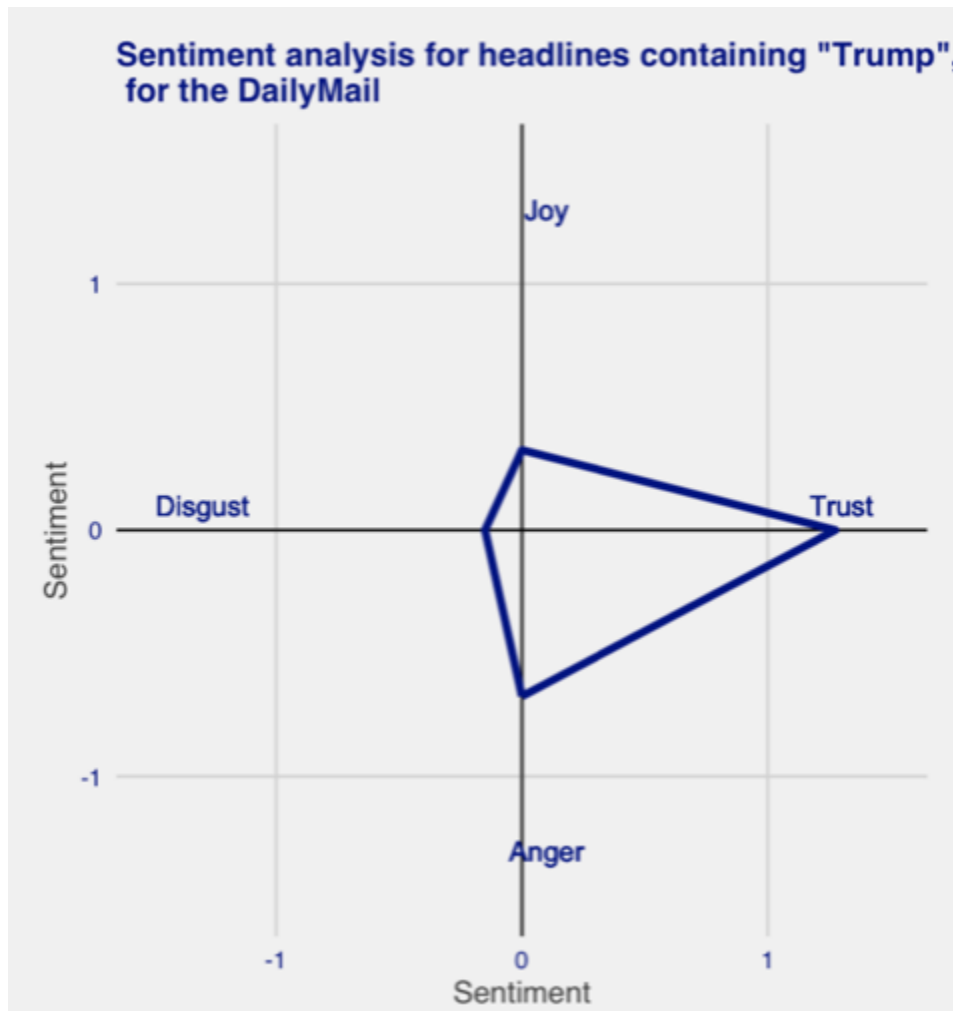


YOUR PLOTS

- Plots by

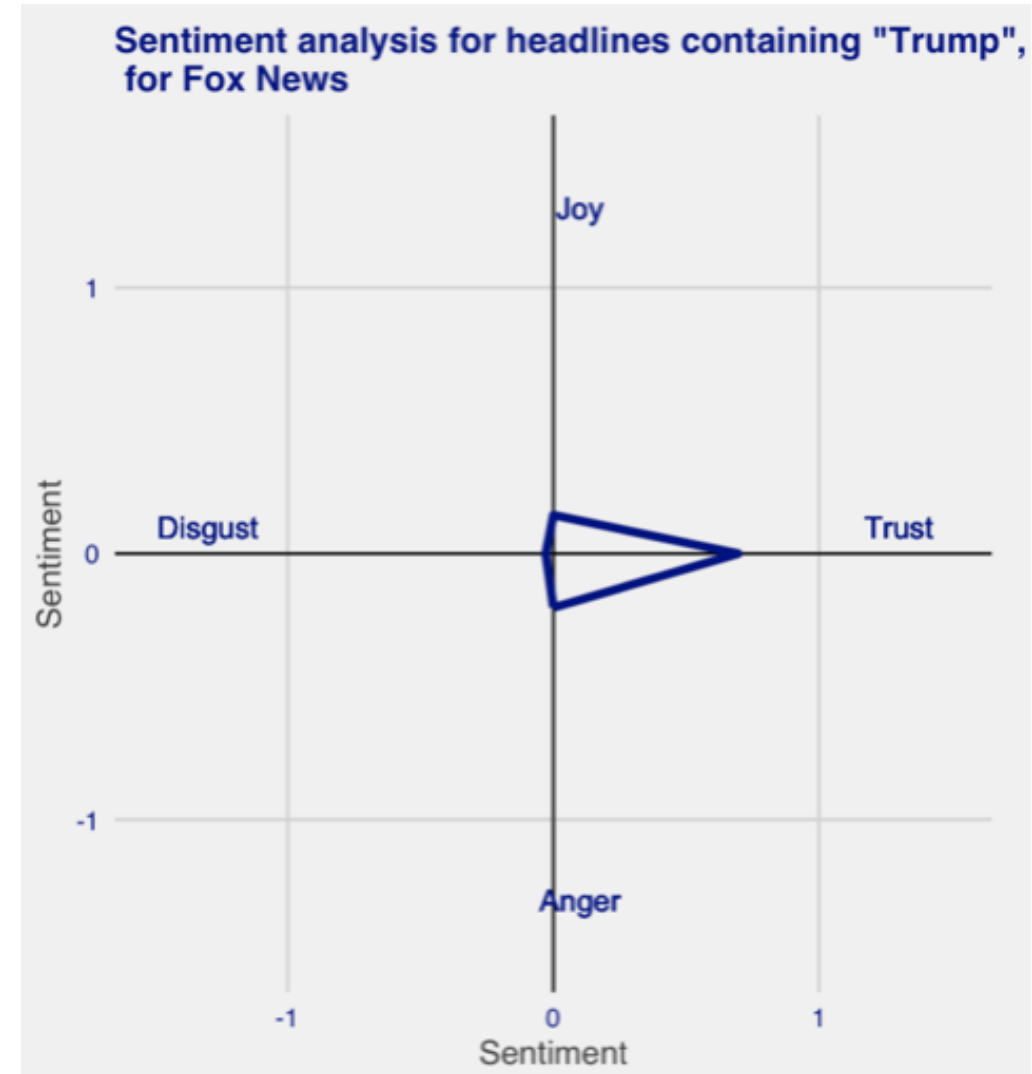
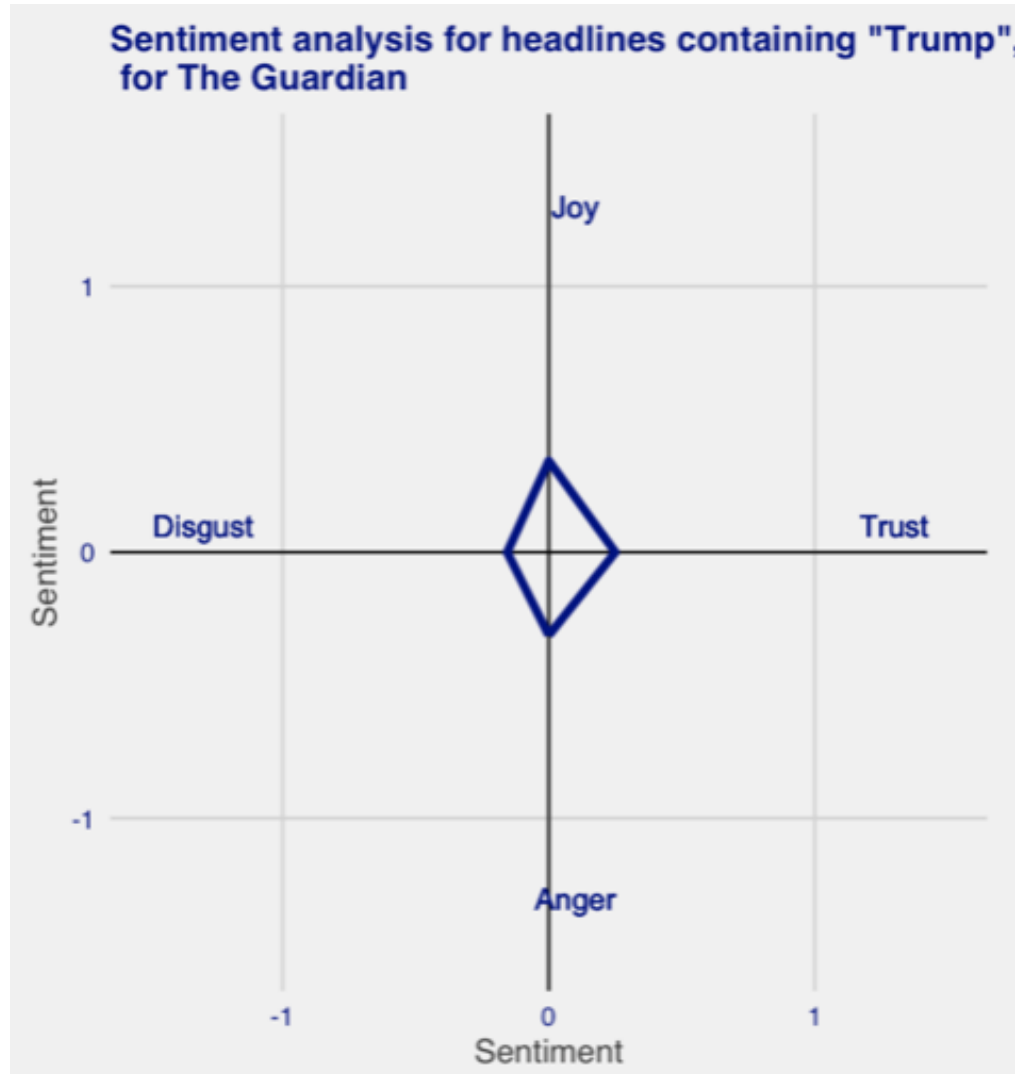
YOUR PLOTS

- Plots by Pietro Violo, PHDS 2022



YOUR PLOTS

- Plots by Pietro Violo



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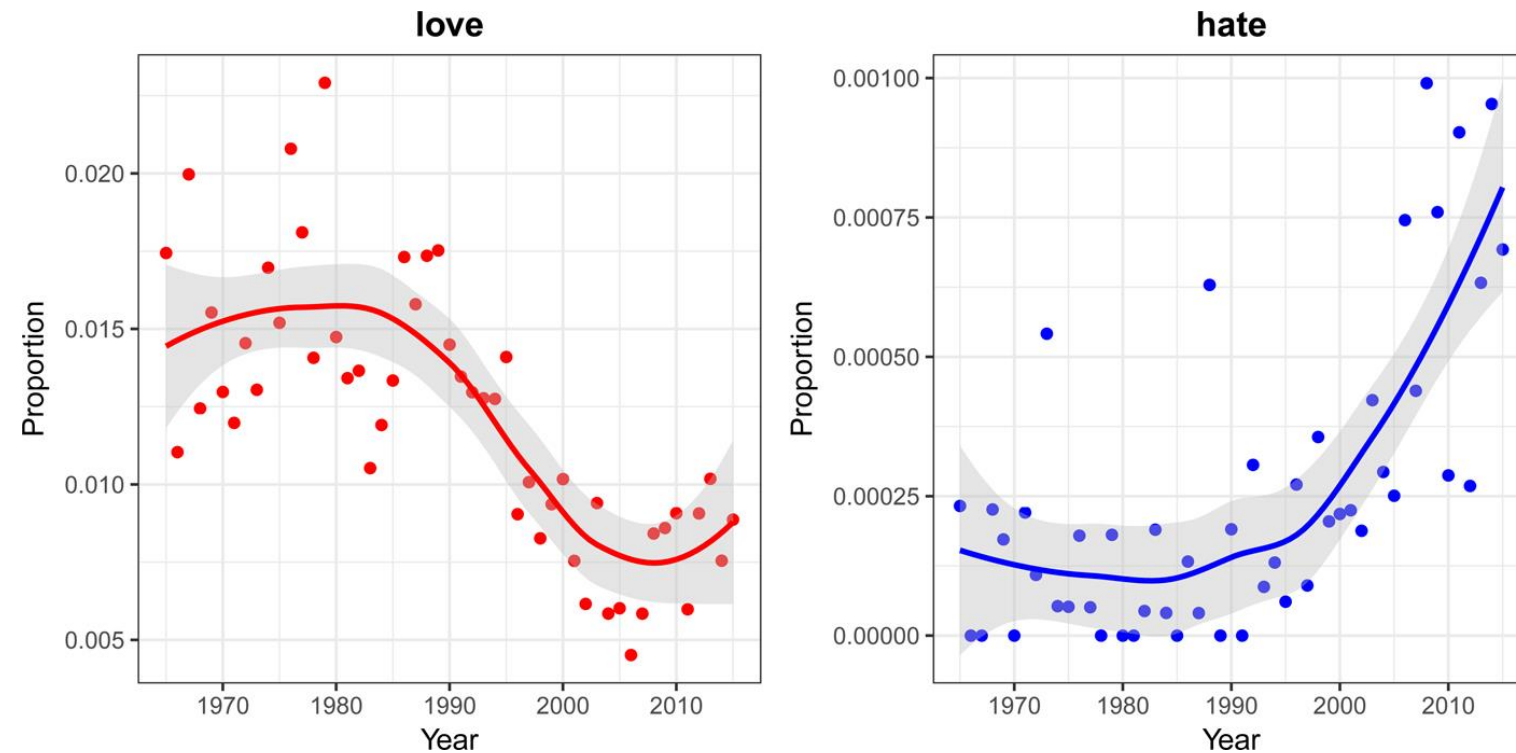
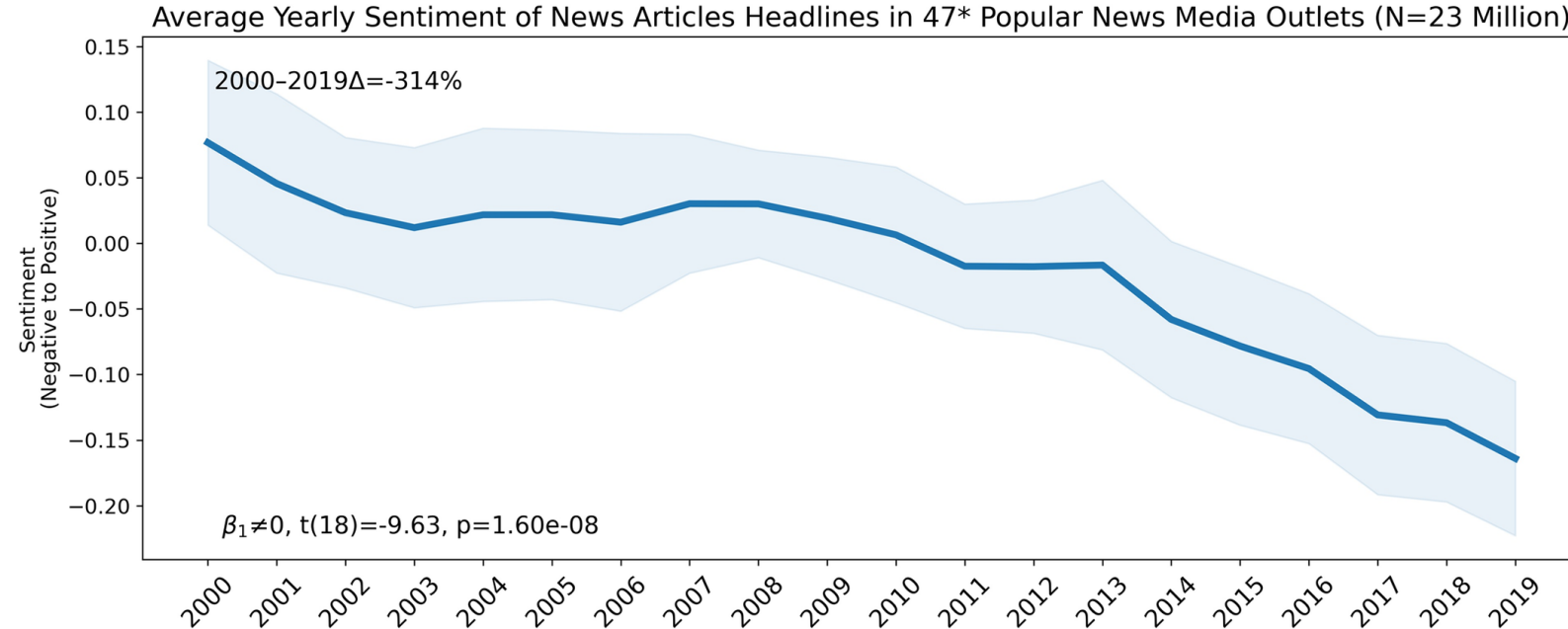


Figure 1. Proportion of the term 'love' (left panel) and 'hate' (right panel) in all song lyrics by year for the dataset billboard which contains the lyrics of the songs included in the annual US Billboard Hot 100 ($n = 4913$ songs). The proportions here are small as we are reporting the proportion of the word out of the total number of words in 100 songs each year (on average 30,000 words, i.e. 300 words/song) and on different scales (the frequency of positive emotion words is usually higher than the frequency of negative emotion words). To have an intuitive idea of the change, from 1965 to 1990, in the top-100 billboard songs, the word 'hate' was used each year around four or five times overall ($30,000 \times 0.00015$), whereas now the average is around 24 ($30,000 \times 0.0008$).

Cultural evolution of emotional expression in 50 years of song lyrics

Charlotte O. Brand, Alberto Acerbi and Alex Mesoudi

PART 2: HOW TO SCRAPE DATA FROM WEBSITES?



The solid blue line shows the average yearly sentiment of headlines across 47 popular news media outlets. The shaded area indicates the 95% confidence interval around the mean. A statistical test for the null hypothesis of zero slope is shown on the bottom left of the plot. The percentage change on average yearly sentiment across outlets between 2000 and 2019 is shown on the top left of the plot.

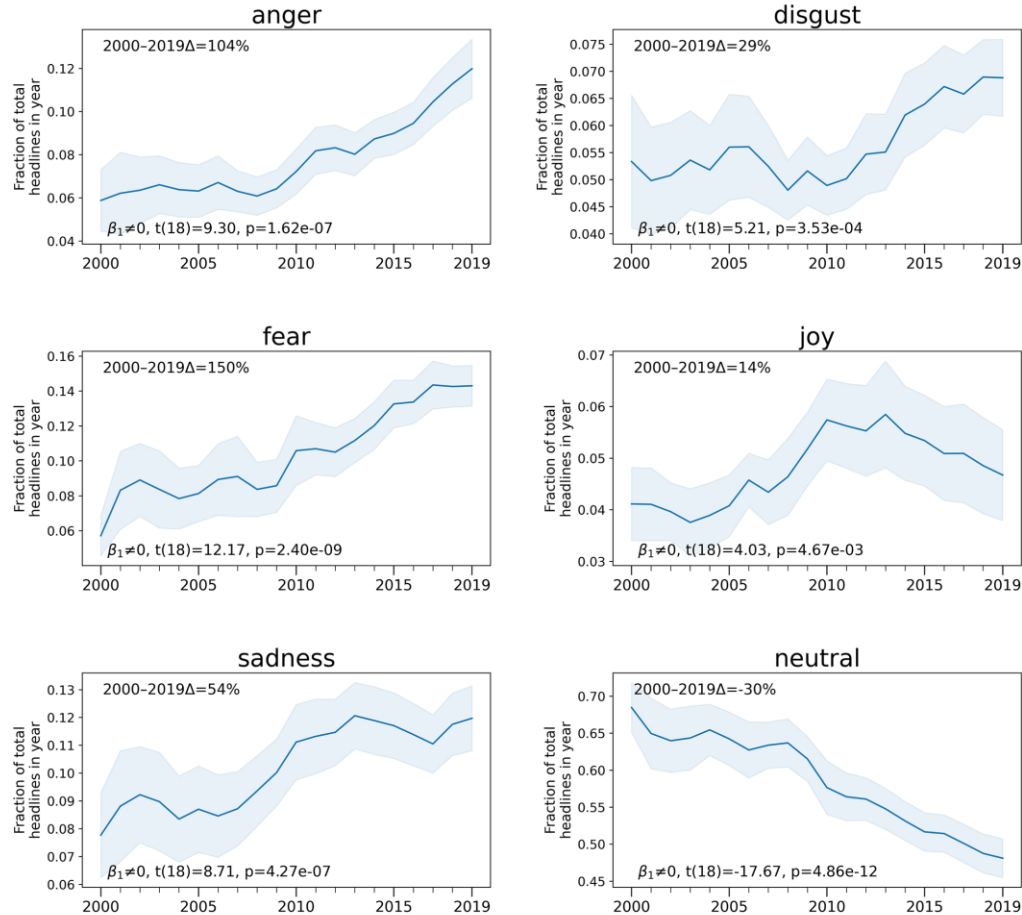
* Alternet, Democracy Now, Daily Beast, Huffington Post, The Intercept, Jacobin, Mother Jones, The New Yorker, The Nation, Slate, Vox, CNN, New York Times, ABC News, The Atlantic, BuzzFeed, CBS News, The Economist, The Guardian, NBC News, POLITICO, TIME, Washington Post, NPR, Associated Press, BBC, Bloomberg, Christian Science Monitor, REUTERS, The Hill, USA Today, Wall Street Journal, Reason, Washington Examiner, Washington Times, Fox News, American Spectator, Breitbart, The Blaze, Christian Broadcasting Network, The Daily Caller, The Daily Mail, The Daily Wire, The Federalist, National Review, New York Post, Newsmax

Longitudinal analysis of sentiment and emotion in news media headlines using automated labelling with Transformer language models, David Rozado , Ruth Hughes, Jamin Halberstadt, October 2022

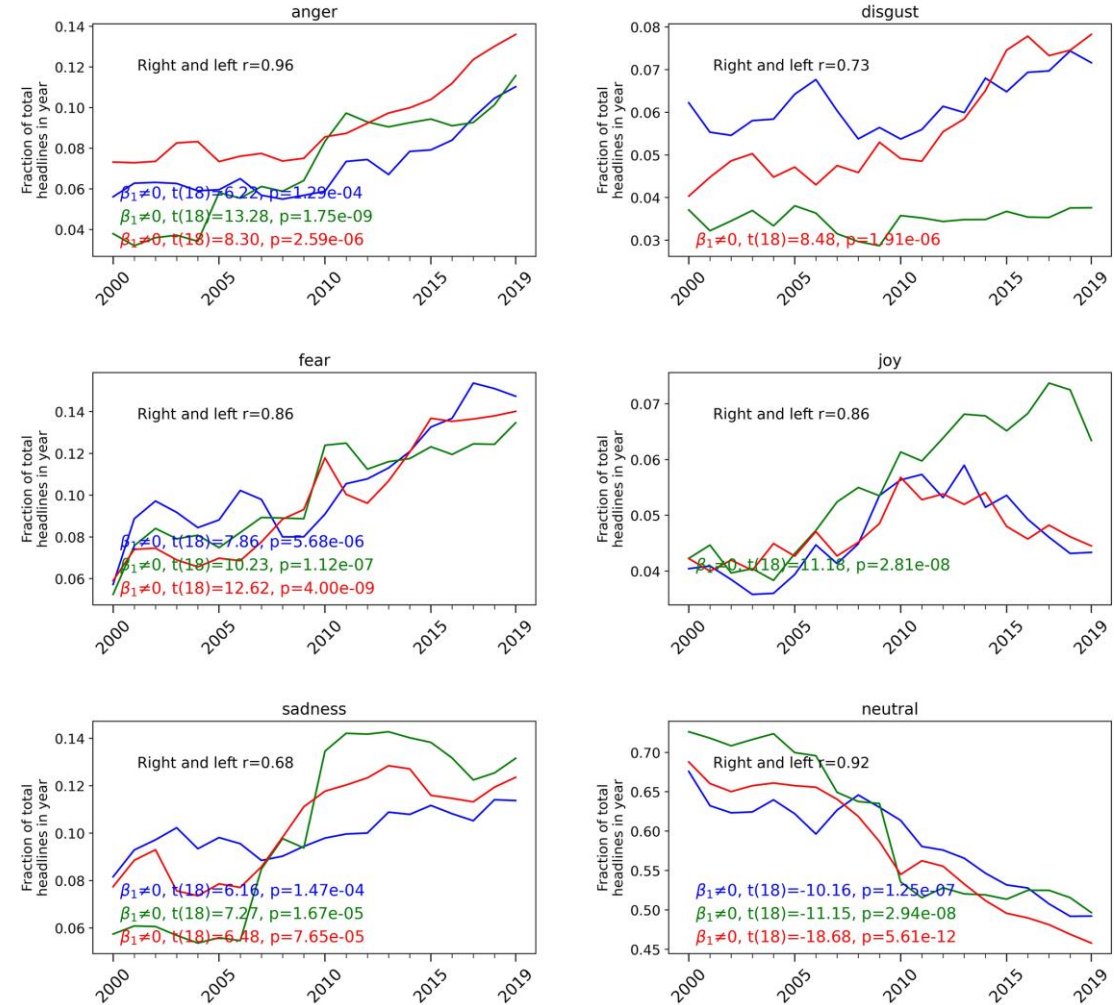
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Prevalence of Emotional Payload in Headlines from 47* Popular News Outlets (N=23 Million)



Prevalence of Emotional Payload in Headlines by Ideological Leanings* of News Outlets (N=23 Million)



* Alternet, Democracy Now, Daily Beast, Huffington Post, The Intercept, Jacobin, Mother Jones, The New Yorker, The Nation, Slate, Vox, CNN, New York Times, ABC News, The Atlantic, BuzzFeed, CBS News, The Economist, The Guardian, NBC News, POLITICO, TIME, Washington Post, NPR, Associated Press, BBC, Bloomberg, Christian Science Monitor, REUTERS, The Hill, USA Today, Wall Street Journal, Reason, Washington Examiner, Washington Times, Fox News, American Spectator, Breitbart, The Blaze, Christian Broadcasting Network, The Daily Caller, The Daily Mail, The Daily Wire, The Federalist, National Review, New York Post, Newsmax

media |
October

Left leaning news outlets Centrist news outlets Right-leaning news outlets

Alternet, Democracy Now, Daily Beast, Huffington Post, The Intercept, Jacobin, Mother Jones, The New Yorker, The Nation, Slate, Vox, CNN, New York Times, ABC News, The Atlantic, BuzzFeed, CBS News, The Economist, The Guardian, NBC News, POLITICO, TIME, Washington Post, NPR,

Associated Press, BBC, Bloomberg, Christian Science Monitor, REUTERS, The Hill, USA Today

Wall Street Journal, Reason, Washington Examiner, Washington Times, Fox News, American Spectator, Breitbart, The Blaze, Christian Broadcasting Network, The Daily Caller, The Daily Mail, The Daily Wire, The Federalist, National Review, New York Post, Newsmax

je



THANK YOU FOR
YOUR ATTENTION!

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