

PUBLIC EMOTIONS IN NORDIC TWITTER DURING THE SECOND WAVE OF THE COVID-19 CRISIS

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WHY STUDYING ANGER...

- Anger appears in response to a threat (Covid19 & safety measures) and often co-occurs with fear.
- Behavioural consequences of anger vs. consequences of fear

- Fear
 - Linked to avoidance
 - Sensitivity and attention to threat
 - Risk overestimation
 - Careful information processing
- Anger
 - Linked to action/approach
 - Less careful and systematic processing of events
 - Diminished risk perception
 - Greater tolerance for risky action

...IN THE NORDIC COUNTRIES?

- Shared characteristics across the Nordic countries
 - Comprehensive healthcare systems (OECD, 2021b)
 - High levels of trust in organizations and the media (Delhey & Newton, 2005; OECD, 2020)
 - Trust in others (OECD, 2020)
- Antecedents that trigger anger distinctively
 - An external cause, especially the intentional actions of some *freely acting' agent who can be blamed (Lazarus, 1991)
 - Coping potential, or the perception that one has control over the situation (Carver, 2004; Frijda 1986)
 - Perception that the situation is unfair, illegitimate, or underserved (Averill, 1983; Roseman, 1991)
 - The familiarity of threat (Marcus, 2002)

RESEARCH QUESTIONS

- 1) Identifying specific topics predicting anger would allow us to further investigate their characteristics and inform future crisis management and communication.
 - What predicts anger in response to threat in the context of a resilient democracy?

- 2) According to the Goldilocks principle, having just the right amount of anger is linked to a healthy democracy. We also know that the more intense the anger, the faster it spreads (Chuai & Zhao, 2022).
 - In our data (i.e., resilient democracy), do we observe a correlation between anger intensity and anger spread?

METHODS

- Twitter from 4 largest Nordic countries, August 2020 – March 2021
- Multilingual transformer model (XLM-RoBERTa, Conneau et al., 2019) to detect emotions
 - Anger, Anticipation, Disgust, Fear, Joy, Sadness, Surprise, Trust, Love, Optimism, Pessimism, Neutral or no emotion.
- Filter based on Covid-19 hashtags
- BERTopic on angry tweets (Grootendorst, 2022)

Twitter database

Danish: 7.369.613
Norwegian: 6.168.893
Finnish: 15.202.337
Swedish: 29.088.137



Covid-19 tweets

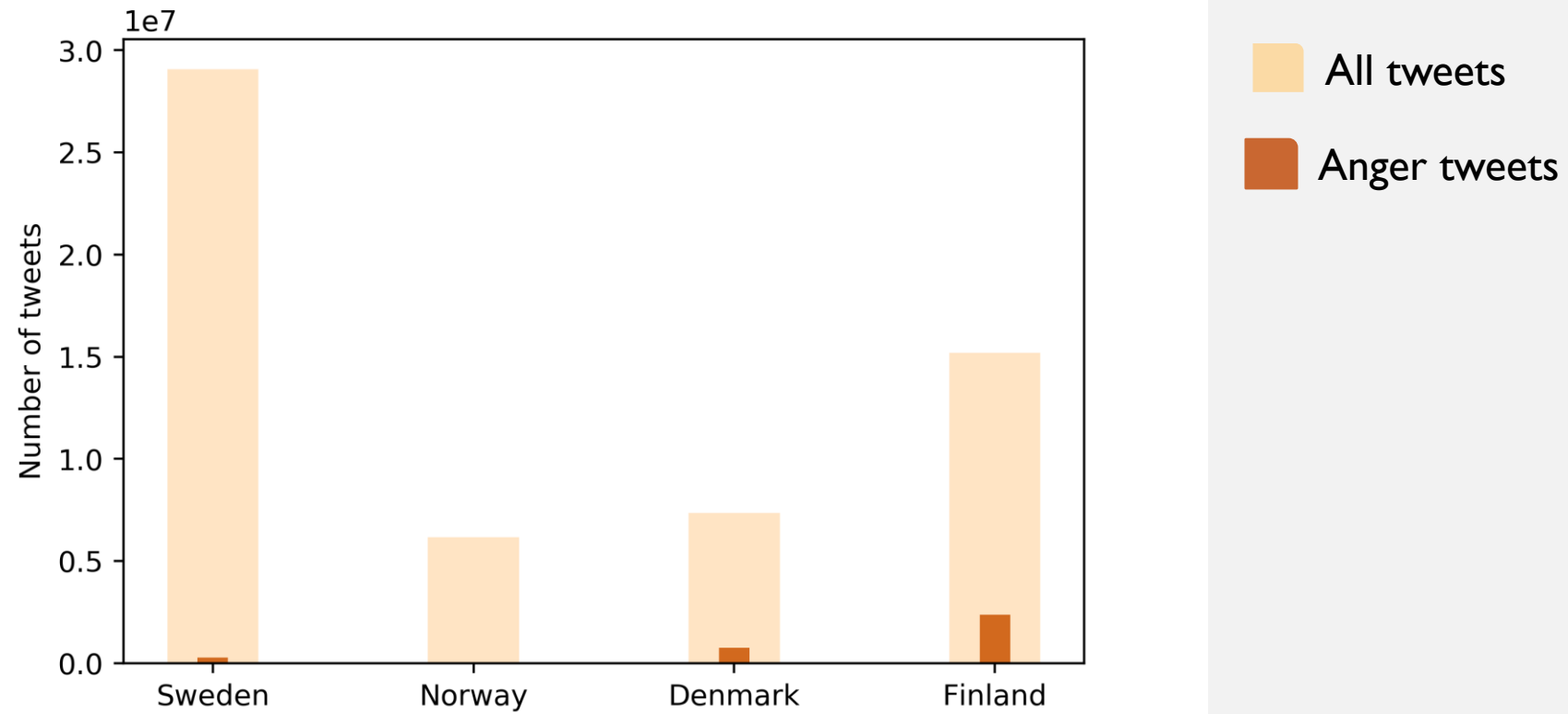
Danish: 21.869
Norwegian: 7.870
Finnish: 97.278
Swedish: 28.758



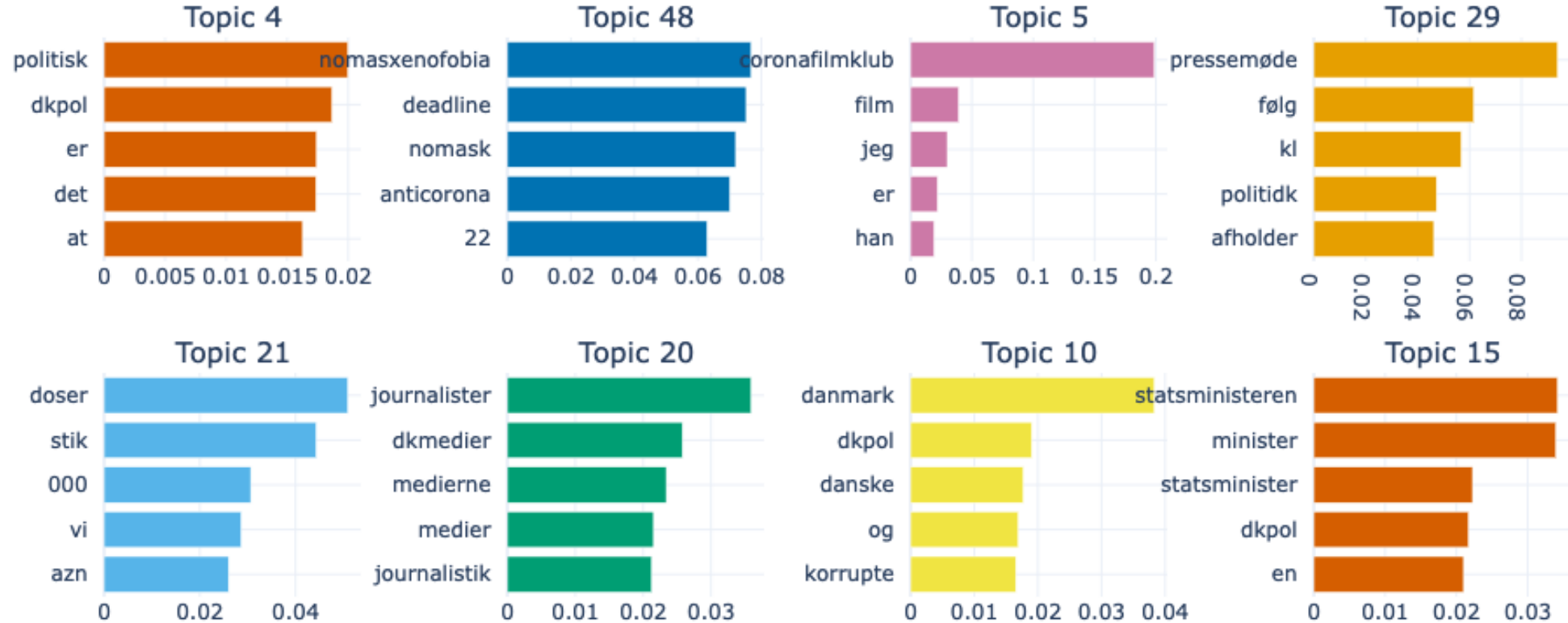
Angry Covid-19 tweets

Danish: 9.588
Norwegian: 1.063
Finnish: 30.510
Swedish: 3.529

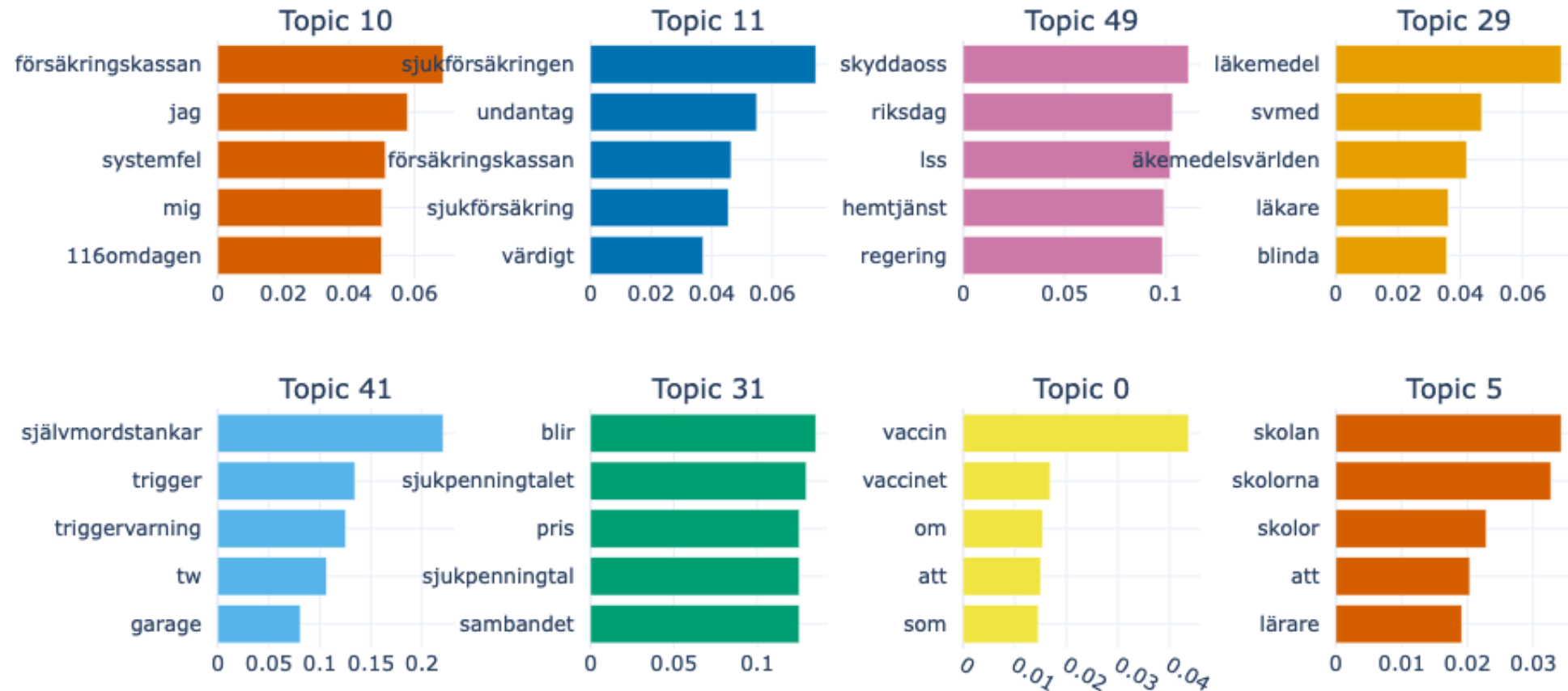
ANGER DETECTION



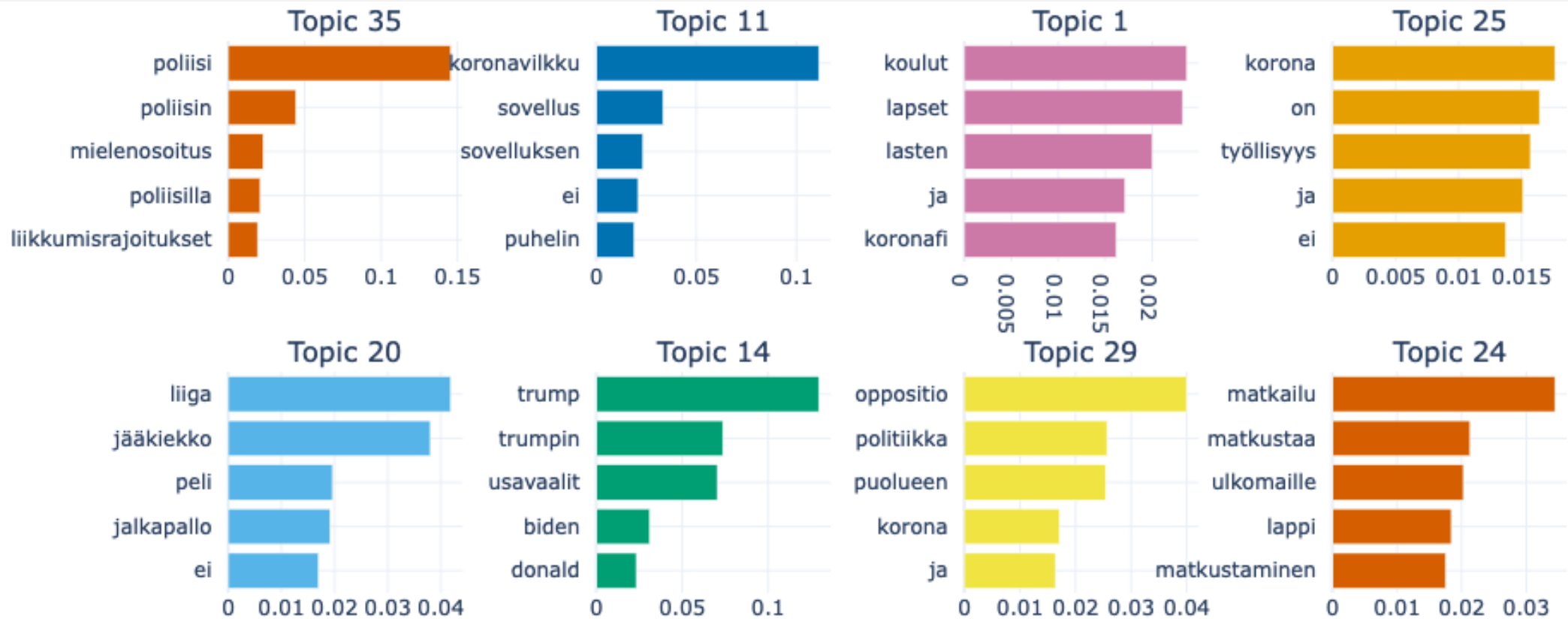
I) WHICH TOPICS FUELED ANGER IN DENMARK?



I) WHICH TOPICS FUELED ANGER IN SWEDEN?



I) WHICH TOPICS FUELED ANGER IN FINLAND?



2) THE GOLDBLOCKS DILEMMA OF ANGER

Inspire action

Helps set priorities

Distribute power



Harden divisions

Distort perception

Misjudge problems

Does 'high anger' spread faster than 'low anger' in the context of healthy democracies?

- No significant differences in number of RT for high vs. Low anger tweets for any of the Nordic countries.

DISCUSSION

- Detected tweets expressing anger in 4 Nordic languages during the second wave of the Covid-19 pandemic
- Which topics predict anger (8-9 topics)
 - Danish: Danish politics (Prime Minister)
 - Swedish: Health insurance (Minister for Health and Social Affairs)
 - Finnish: Restrictions
 - Norwegian: Mixed, very little anger tweets
- Tweets that express more anger did not 'travel faster' than those expressing medium anger in the Nordic countries.

THANK YOU



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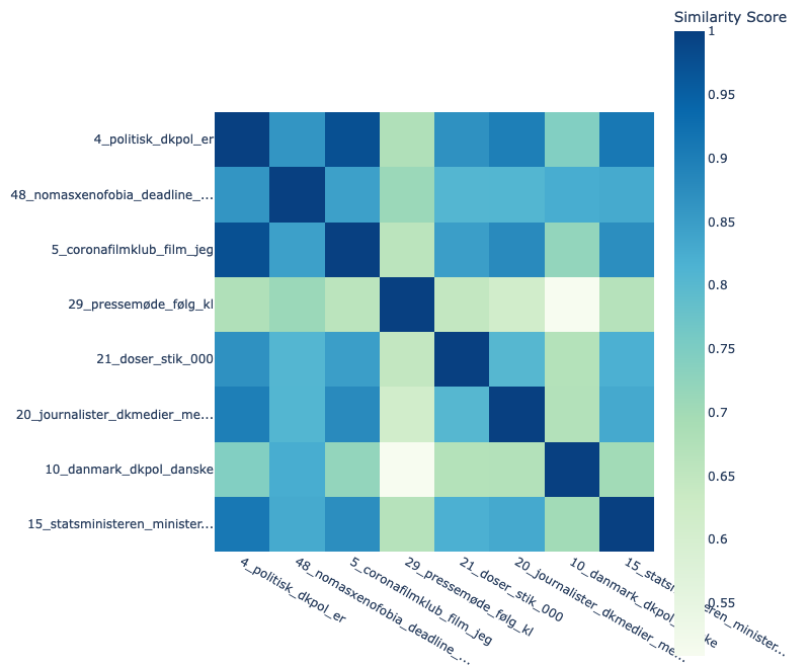


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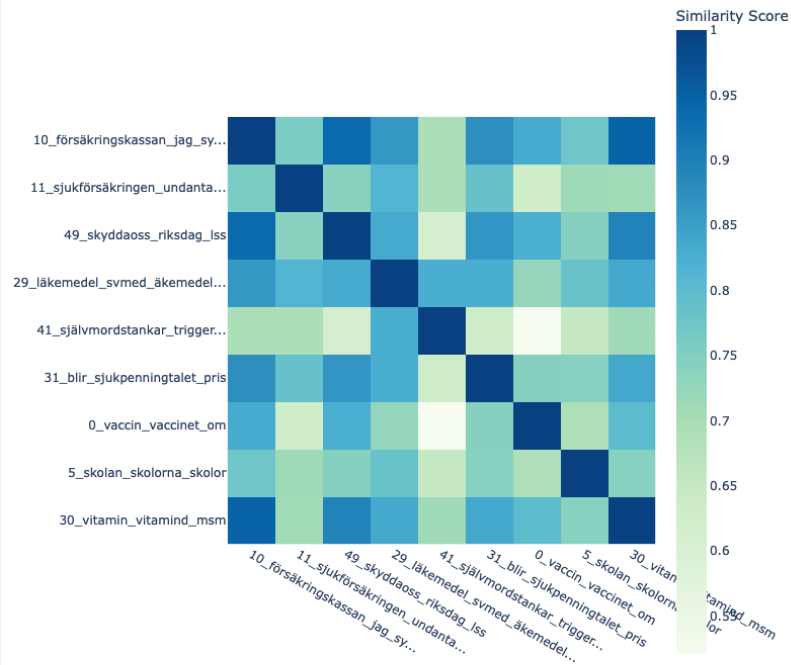


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Similarity Matrix



Similarity Matrix



Similarity Matrix

