

No NLP Task Should be an Island: Multi-disciplinarity for Diversity in News Recommender Systems

Myrthe Reuver¹, Antske Fokkens^{1,2}, Suzan Verberne³
1CLTL, Dept. of Language, Literature & Communication, Vrije Universiteit Amsterdam, 2 Dept. of Mathematics and Computer Science, Eindhoven University of Technology, 3 Leiden Institute of Advanced Computer Science, Leiden University

correspondence: myrthe.reuver[at]vu.nl

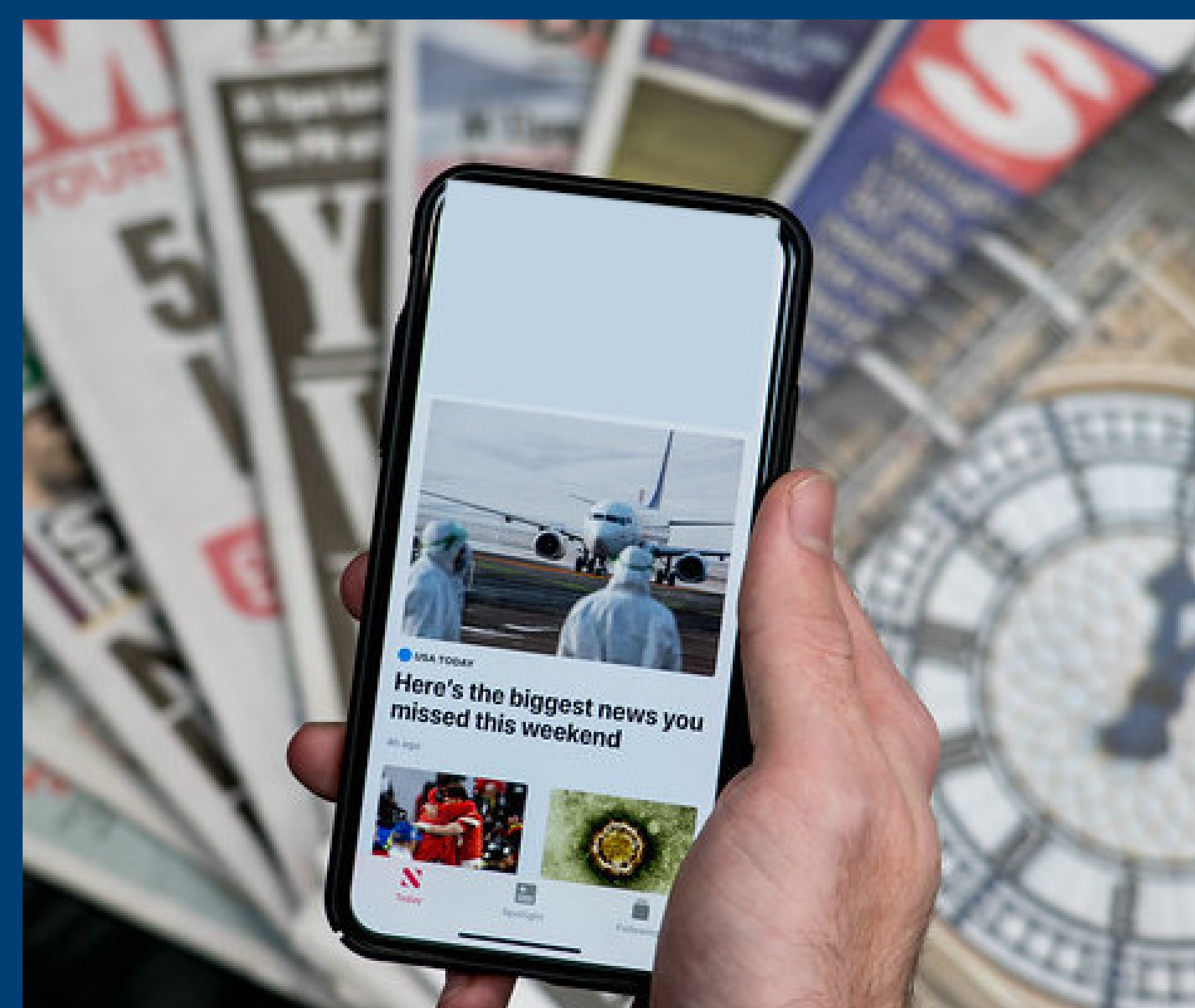
Introduction

- NLP is organized in tasks, leaderboards, etc.
- For complex societal issues, this is not sufficient
- Our focus: **filter bubbles in news recommendation** are a threat to democracy.
- We assess the usefulness of NLP tasks and datasets for **diverse** news recommendation

Personalised news and theories of democracy

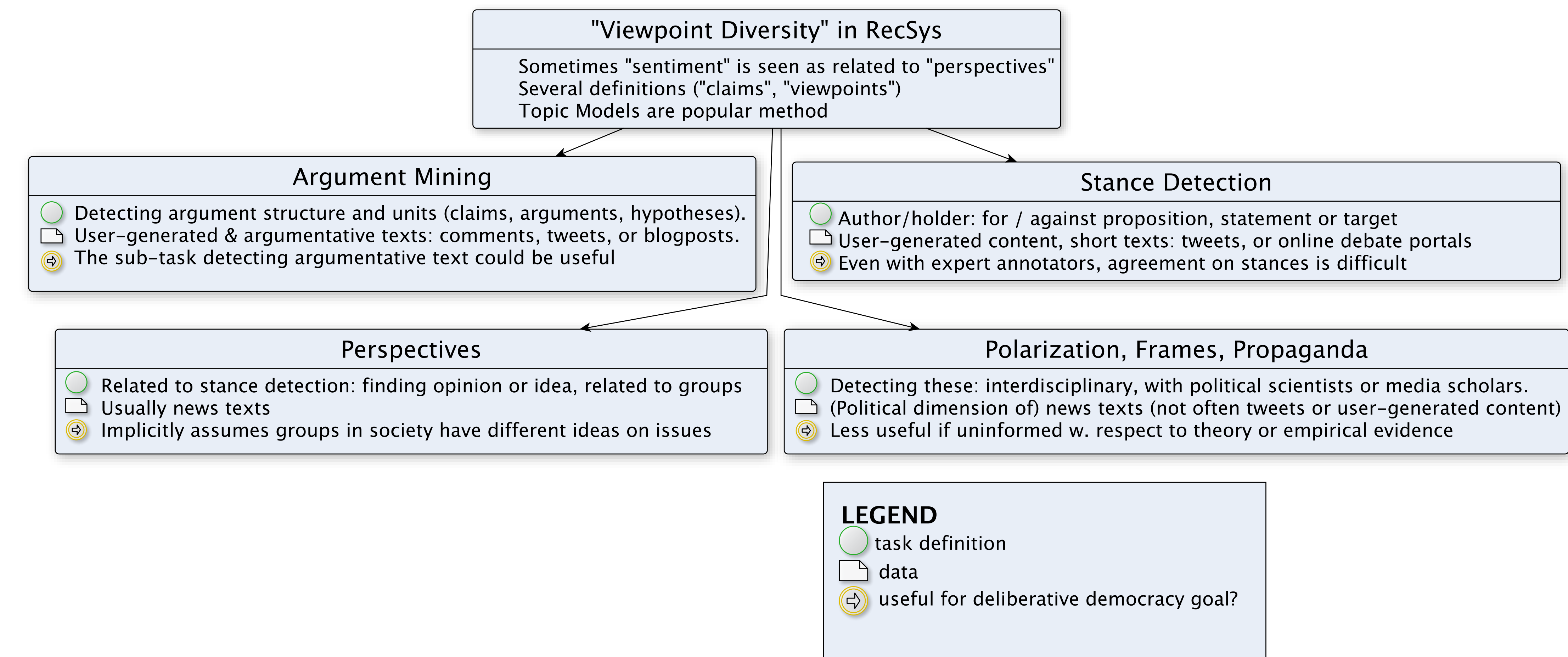
- Online news spaces are personalized by user interest and attention.
- Helberger (2019) points out this is harmful to democracy, as individual users are increasingly unaware of different ideas or standpoints.
- The model of *deliberative* democracy states that a functioning democracy requires **citizens to be aware of others' opinions and ideas.**

Diversifying news recommendations in support of a deliberative democracy is a real-world, complex problem, that requires improving existing NLP tasks, or developing new ones.



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Relevant NLP Tasks



Important Considerations

Evaluation

- "Beyond accuracy" (like "beyond click-accuracy" in RecSys)
- RecSys: (external) evaluation metrics based on models of democracy in Vrijenhoek et. al. (2021)

Task-ification

- Complex societal issues = looking beyond individual tasks, definitions, and datasets

Other Disciplines

- Complex societal issues require expertise from other disciplines (psychology, media studies, etc.)
- Deliberative democracy, and models of democracy, are useful concepts for NLP and challenges in which NLP is involved.

Ethical and Normative Considerations

- What does it mean to support a deliberative democracy? Maximizing diversity of viewpoints? Likely not. Some viewpoints or ideas -> inherently harmful to the overall goal of deliberation.
- Explicit underlying values and goals of democracy to identify where an NLP task, dataset, or idea gives friction w real-world application or goal.

References

Natali Helberger. 2019. On the democratic role of news recommenders. *Digital Journalism*, 7(8):993-1012

Sanne Vrijenhoek, Mesut Kaya, Nadia Metoui, Judith Möller, Daan Odijk, and Natali Helberger. 2021. Recommenders with a mission: assessing diversity in news recommendations. In the Proceedings of the SIGIR Conference on Human Information Interaction and Retrieval (CHIIR), 173-183. <https://doi.org/10.1145/3406522.3446019>.