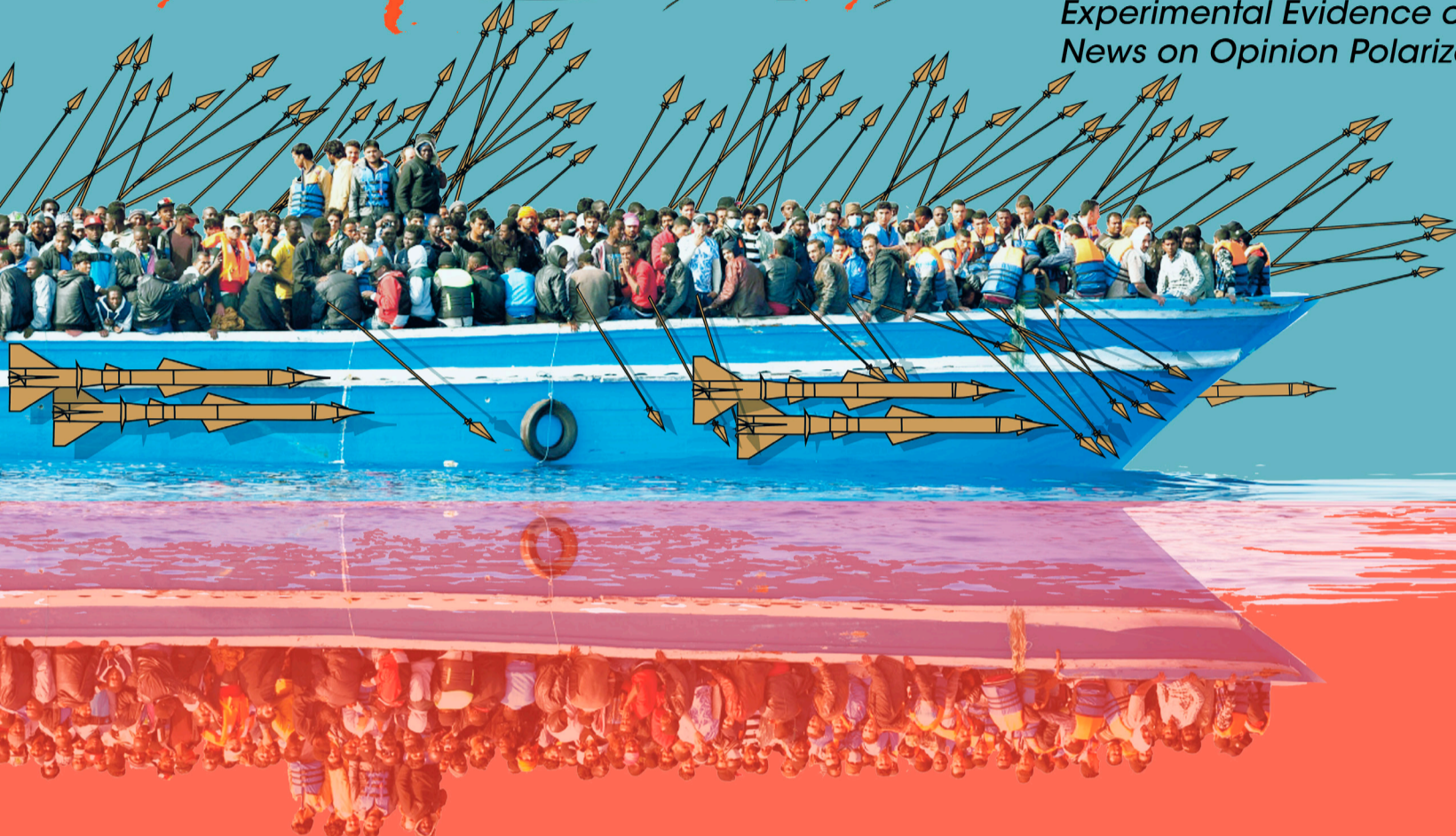# Fake News Immigration and Opinion Polarization

Experimental Evidence on the Impact of Fake News on Opinion Polarization

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Background

Designed to supply misinformation spread via traditional print and broadcast news media or online social media – fake news has the intention to mislead and orientate people's opinions on politics, science and society, often with sensationalist and manifestly false headlines that grab the attention of the readers.

Nowadays, it is hard to venture online without coming across Fake news; as a result, people are finding hard times moving through an entirely new distorted era of misinformation and biased news.

In this paper, we investigated the effect of fake news on people's opinion polarization on a hot topic – such as immigration – through an experiment.

We show how fake news exacerbate opinion polarization. We also show that the emotion-driven effect of fake news can be neutralized thanks to ex-ante signaling of the untruthfulness of fake news.

Methodology

We designed three online questionnaires. Every participant was randomly assigned to one of them (we had 150 participants in total). The first part of the survey was common to all the participants. We designed a series of statements the participants had to say to which extent they agreed or disagreed with. This part of the survey helped us capture participants' level of openness and nationalism and their emotionality.

In the second part, we asked participants to read fake news about immigration in Sweden where "(..) Sexual abuse from newly arrived migrants is not only prevalent in schools but that victims are accused of being racist if they speak out."

For treatment 1 the article was presented as a legitimate article, whereas in treatment 2 we stated directly to the participants that the article was a made-up story. Control group had no article to read. In the last part of the questionnaire – common to each group – participants had to say to which extent they agreed or disagreed with a series of statements concerning immigration.

Based on the responses to the statements concerning immigration, we created an opinion index in order to measure people's attitude toward immigrants. Finally, we created an opinion polarization index such that the more a person expresses agreement or disagreement on the topic the higher the index is.

Control Group	Treatment.1	Treatment.2
Questions about openess and emotional responsiveness	Questions about openess and emotional responsiveness	Questions about openess and emotional responsiveness
No Fake News to read	Read the Fake News	Read the Fake News, knowing it is fake
Questions about participant's opinion about Immigration	Questions about participant's opinion about Immigration	Questions about participant's opinion about Immigration
N = 56	N = 46	N = 48

Results

Treatment 1 group recorded higher levels of polarization (M=2.82) than treatment 2 (M=2.15), t(-3.51), p<0.01; and control group (M=2.25) , t(-2.99), p<0.01. However, control group and treatment group 2 do not differ significantly from one another [fig.1]

Starting from the Local Treatment Average Effect, we were also able to test if the polarization effect works asymmetrically between participants with positive and negative opinions about immigrants [fig. 2]
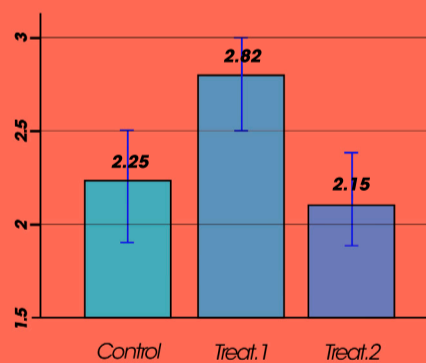

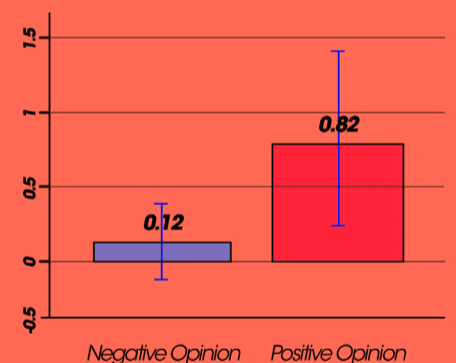**Fig.1** Mean Opinion Polarization Index of the 3 groups

Fig.2 Comparison of the variation in polarization with respect to the control group for pro-immigration individuals(red) and cons-immigration individuals (blue) who were assigned to treatment 1.

Conclusions

- We observe that exposure to fake news increases polarization. This increase holds when we compare Treatment 1 vs. treatment 2.

- We showed that the polarization works asymmetrically in the sense that people who perceive the fake news as a threat for their beliefs get more polarized than the ones for which the fake news supports their beliefs.

- Considering that there is no significant effect when comparing treatment 2 and the control group, we infer that providing tools to identify fake news could drastically reduce extreme polarization and can help to reduce unproductive flame discussions on controversial topics.