Unknown Facts About Fake News

~Comparison Among Different Countries and Age Groups~

Reina Kishida

Asahigaoka High School



Fake news is a global threat in this modern age of the Internet. Although much research on fake news has been conducted the past decade, it is uncertain what kind of fake news is believed by people of certain ages or nationalities. Since our individual interests largely depend on each of our backgrounds, I wondered if these could influence what fake stories we are susceptible to. I had an opportunity to ask Mr. Jon Roozenbeek of Cambridge University about this research topic.

(2) Introduction

Background:

The 2016 U.S. presidential campaign

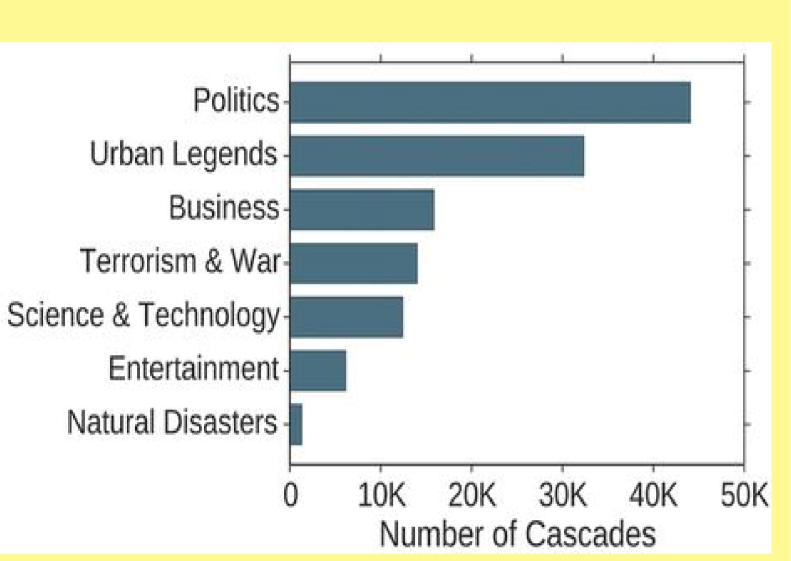
→ Number of engagements on Facebook: Fake news > general news

Prior research:

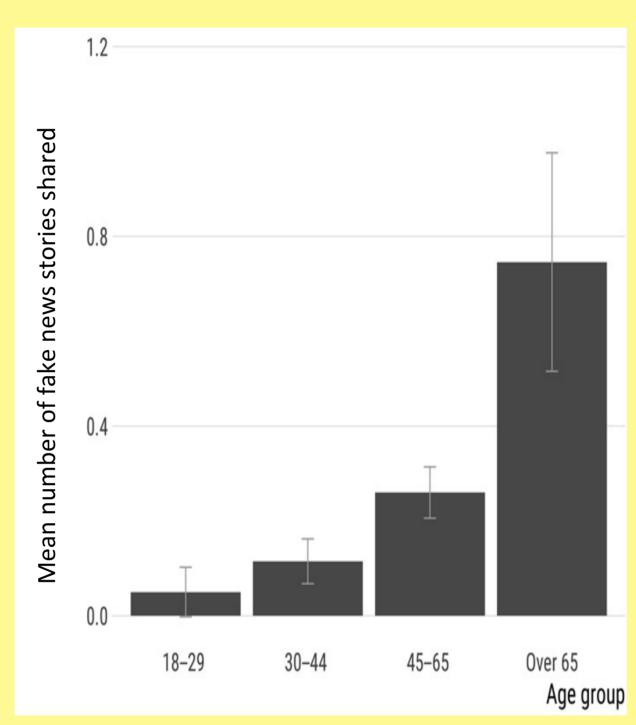
Topics of fake news such as politics are more likely to be disseminated on social media (graph 1); older people were more susceptible to fake news during the 2016 election campaign (graph 2).

Fundamentals

- * engagement: The total number of reactions such as shares, likes, or comments on social media.
- * cascade: A relay of retweets; a "rumor-spreading pattern that exhibit an unbroken retweet chain with a common, singular origin." (Vosoughi et al., 2018)



Graph1: Total number of rumor cascades across the seven most frequent topical categories (Vosoughi *et al., Science,* 2018)



Graph2: Average number of fake news shares using domains derived from age group (Guess *et al., Sci. Adv.,* 2019)

(4) Results

Answers received from Mr.Roozenbeek

1)About age:

It's possible. Older people do take more interest in politics. But my intuition is older people are susceptible to all kinds of fake news, especially online. The main reason for this is that elderly people generally have lower levels of digital literacy.

2)About country:



This is mostly unknown. Effects could exist, but I think they're small. Other aspects such as education or ideological belief might be more important. However, in polarized countries, fake news might have a more direct effect on the population. This also makes a lot of sense in the individual level. For example, if someone is in debt, they become more vulnerable to people who promised to give them some money. If that is the case with individuals, it might be the case with the whole population. In such a situation, lots of people may be quite likely to fall for scams in unstable circumstances.

Discussion

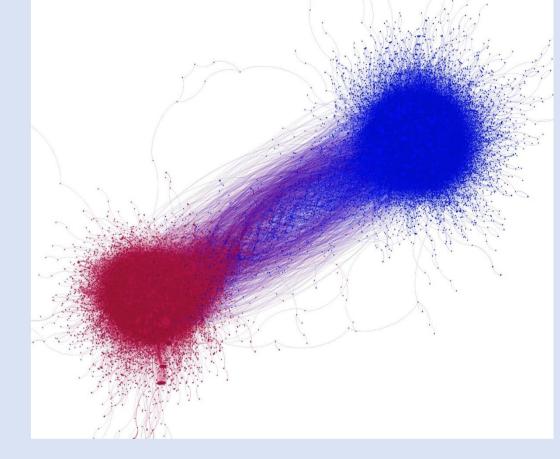
What Mr.Roozenbeek told me:

Too many aspects to take into account.

→ This research question is extremely difficult to solve. Age and nationality will most likely have little effect on the fake news topics that people tend to share online. However, he also emphasized that this was based on his speculation.

What I have found:

Once we know the answers, there may be some possibility that we would have better understandings about what kinds of misinformation we need to especially look out for independently.



Network of retweets showing democrats (in blue) and republicans (in red) divided into two distinct communities.

(Ribeiro et al., 2017)

(3) Methodology

Research Question

What topics of fake news are easily believed, and how much does age and nationality of the users associate with this?

My Prediction

1)Age:

On social media, younger people tend to share fake news about entertainment or urban legends, whereas older people are more likely to share political news.

2)Country:

Politically, economically unstable countries

→Susceptible to misinformation.



Interview with Mr. Jon Roozenbeek (Department of Slavonic Studies)

(5) Conclusion

Fake news has the power to anger and manipulate people, and it can be a threat to our democratic society. Therefore, it is extremely important for us to acquire a critical perspective for online information, supposedly through education. However, the current digital literacy education held in schools may no longer be as effective in the future as now, because as technology evolves, so will the digital society and its problems.

One alternative solution is to create a new form of this education for everybody— including people who are not students. For example, there has been a new concept called "inoculating" against fake news. By playing fake news games, players acquire the literacy skills to better distinguish falsity from the truth. New approaches such as this one, suggest that there should be chances for new breakthroughs in this field of research, and I'm looking forward to them.



Acknowledgements

I would like to express my sincere gratitude to

Mr. Jon Roozenbeek (Department of Slavonic Studies, Darwin College, University of Cambridge), and the Asahigaoka teaching staff (Ms. Keiko Kurokawa, Ms. Misaki Nakamura).

Bibliography

Dianog: GP1.7Sasahara, K. (2018).フェイクニュースを科学する 拡散するデマ、陰謀論、プロパガンダのしくみ (DOJIN選書). Kyoto: 化学同人.

Roozenbeek, J. and van der Linden, S. (2019). Fake news game confers psychological resistance against online misinformation. *Nature*, [online] Palgrave Communications. Available at:

https://www.nature.com/articles/s41599-019-0279-9 [Accessed 4 July 2019].
Guess, A., Nagler, J. and Tucker, J. (2019). Less than you think: Prevalence and predictors of fake news dissemination on Facebook. Science Advances, [online]5, eaau 4586. Available at:

https://advances.sciencemag.org/content/5/1/eaau4586/tab-pdf [Accessed 4 July 2019]

Vosoughi, S., Roy, D. and Aral, S. (2018). The spread of true and false news online. *Science*, [online]359, 1146-1151. Available at : https://science.sciencemag.org/content/359/6380/1146 [Accessed 5 July 2019]