BUILDING PSYCHOLOGICAL DEFENCES AGAINST MISINFORMATION

Date: November 20, 2024

Disclaimer: This briefing note contains the encapsulation of views presented by the speaker and does not exclusively represent the views of the Canadian Association for Security and Intelligence Studies.

KEY EVENTS

On November 20, 2024, Dr. Sander van der Linden presented *Building Psychological Defences Against Misinformation* for this year's West Coast Security Conference. The presentation was followed by a question-and-answer period with questions from the audience and CASIS Vancouver executives. The key points discussed were that misinformation can drive public confusion, spark social discord and weaken trust in legitimate sources. Debunking falsehoods after they spread may not reverse deep-seated beliefs, so priming individuals to spot the techniques behind misinformation is a more robust safeguard. Lastly, as new tactics like deepfakes and AI-driven distortions emerge, countermeasures must stay flexible and creative to maintain an effective defence.

NATURE OF DISCUSSION

This discussion focused on the increasing impact of false narratives, emphasizing how misinformation weakens public trust and disrupts effective crisis responses. It examined both psychological and technological factors that intensify the spread of misinformation, highlighting the proactive approach of prebunking to strengthen psychological defences. Emotional biases and social dynamics often amplify misinformation, making it harder to later debunk. Therefore, staying ahead of emerging threats in the information space will require flexible strategies.

BACKGROUND

Presentation

Media consumption is a major predictor in psychological resilience to misinformation; people with the highest resilience levels tend to consume news from credible mainstream outlets, while people with the lowest resilience levels

get their news from social media platforms like Snapchat, Tiktok and Truth Social. In order to quantify a person's susceptibility to misinformation, Dr. van der Linden created the Misinformation Susceptibility Test, a psychometrically validated tool that asks users to determine the reliability of headlines, some fake and some real. Other factors that can contribute to a susceptibility to misinformation include political extremism, a high level of cognitive rigidity, or a high level of distrust.

Misinformation can be detrimental to the health of societies and people. This was demonstrated in Iran when hundreds of people were hospitalized after falling for a hoax that methyl alcohol could cure coronavirus, and again when false information about Haitian immigrant communities in Ohio eating cats and dogs led to racial tensions, attacks and property damage.

Although misinformation and conspiracy theories proliferate online and through the media, they are not new phenomena. By studying historical trends, we can better predict and respond to future occurrences. Using anti-vaccine ideologies as an example, Dr. van der Linden drew parallels between an 1802 painting depicting humans growing cow body parts after cowpox inoculation and the modern-day belief that mRNA vaccines make changes to one's DNA.

In defining misinformation, it is important to keep in mind that it encompasses more than just claims that are demonstrably false; it also includes misleading information that may be partially true but is otherwise manipulative, biased, or lacking context. Therefore, in order to build resilience to misinformation, we must cultivate critical thinking and judgement skills within the general population. This will allow users to identify potential misinformation even when it comes from traditionally reputable sources.

Since many people tend to fall victim to misinformation because it fits in with their worldview, simply debunking misinformation isn't always effective. Instead, Dr. van der Linden introduced the idea of prebunking, which acts as a type of psychological inoculation. This involves exposing people to weakened versions of falsehoods, deconstructing them and examining the techniques used to spread them, thereby helping people build awareness as a psychological antibody against misinformation.

Although these so-called 'inoculations' have been successful in a research setting, applying these findings to benefit the general public will require as much flexibility and inventiveness as modern disinformation tactics employ. As deepfakes, Large Language Models (LLMs), AI and other misinformation

campaigns evolve to be more effective, we must grow our toolkit beyond just fact-checking. It will require experimentation, creativity and new tactics to protect people against online manipulation. To do so, Dr. van der Linden and his team developed a fake news game, getbadnews.com, that introduces impersonation, misinformation, fearmongering and other common media tactics to help users familiarize themselves with modern misinformation. Shown to be effective at increasing users' confidence and cognitive immunity against misinformation, this technique has been applied to real-world scenarios successfully, including the Go Viral campaign in the UK to tackle misinformation about COVID-19. Similarly, Harmony Square was designed to help users identify misinformation and polarizing information that is common during elections.

Question and Answer

Measuring mis/disinformation to the public via social media can be hard for researchers because the level of perception as measurement can be tough to measure in real time – what methods do you recommend for measuring perception levels of mis/disinformation to the public?

One of the reasons we developed the Misinformation Susceptibility Test is because there are no known mechanisms for this. Researchers could create their own social media simulations to measure things like dwell times to gain better access to behavioral data that's often heavily restricted by major social media platforms.

Given your vast experience now with the data and perhaps even the people surveyed, what do you believe is the attraction to "fake news?" It would seem that no matter how outrageous the claim is (harkening back to your reference to the false reporting of immigrants eating pets in Ohio) there is a significant attraction to wanting these types of stories to be true.

Some theories posit that people are just overloaded with information and don't pay enough attention to accuracy, while others say that people are motivated to seek out information that aligns with their worldview. Taking the Ohio example, there are social dynamics at play as well, where people may be inclined to share information that they don't fully believe if it's being shared within their networks.

Can technological tools, or the new come up of AI, be used to combat misinformation, such as the community notes function on X, and is this method

effective to limit misinformation, especially since a younger audience uses these social media sites as a news source?

There is a large body of research that suggests crowdsourced ratings can be effective in helping people identify misinformation. This offers a benefit for people who distrust traditional fact-checkers, as information from a peer or community member can be seen as more reliable. However, the community note system is vulnerable to being hijacked by clusters of people with biased agendas. Research has also shown that engaging with LLMs can help debunk conspiracy theories as the models can be seen as less biased than a human.

KEY POINTS OF DISCUSSION

- Misinformation can drive public confusion, spark social discord and weaken trust in legitimate sources, making it harder for leaders to respond to crises effectively.
- Defining misinformation is important; it includes deliberate lies and half-truths that obscure facts or twist evidence, often preying on emotions and biases.
- Personal leanings, echo chambers, and group loyalties can increase vulnerability to misinformation.
- Correcting falsehoods after they spread may not reverse deep-seated beliefs, so priming individuals to spot the techniques behind misinformation is a more robust safeguard.
- As new tactics (like deepfakes and AI-driven distortions) emerge, our countermeasures must stay flexible and creative to maintain an effective defence.

FURTHER READING

Van der Linden, S. et al. (2024, June 5). Misinformation poses a bigger threat to democracy than you might think. *Nature News*. https://www.nature.com/articles/d41586-024-01587-3

Van der Linden, S. et al. (2022). Psychological inoculation can reduce susceptibility to misinformation in large rational agent networks. *Royal Society Open Science, 9*(8). https://doi.org/10.1098/rsos.211953

Van der Linden, S. (2022, March 10). Misinformation: Susceptibility, spread, and interventions to immunize the public. *Nature News*. https://www.nature.com/articles/s41591-022-01713-6

CASIS Vancouver. (2021). Weaponized Misinformation A.K.A. #FakeNews. *The Journal of Intelligence, Conflict, and Warfare*, *2*(2), 80–86. https://doi.org/10.21810/jicw.v2i2.1058

Published by the Journal of Intelligence, Conflict, and Warfare and Simon Fraser University
Available from: https://jicw.org/