

Notes: Misinformation and False Belief Formation

Drawn from:

Newman, E. J., Swire-Thompson, B., & Ecker, U. K. H. (2022). Misinformation and the sins of memory: False-belief formation and limits on belief revision. *Journal of Applied Research in Memory and Cognition*, 11(4), 471–477.

Refer as needed to the original.

1. On Susceptibilities to Misinformation/Disinformation

Susceptibilities to misinformation and disinformation are a problem because they can entrench false beliefs, polarize societies, undermine trust in credible information sources, and obstruct effective decision-making. Minimizing these vulnerabilities is crucial for a well-informed public and social stability.

Cognitive Biases:

- Confirmation Bias (*information that fits what I already believe seems more true*): People tend to favor information that confirms their existing beliefs, leading them to accept misinformation that aligns with their views while dismissing factual information that contradicts them. This bias can entrench false beliefs and polarize public opinion, making it difficult to reach consensus on critical issues.
- Availability Heuristic (*often repeated information seems more true*): The tendency to rely on readily available information means that frequently encountered misinformation can be perceived as true. This can distort public understanding and decision-making, particularly when accurate information is less accessible.

Emotional Influence:

- Emotional Content (*intense messages can seem more true*): Misinformation that triggers strong emotions, such as fear or anger, is more likely to be believed and shared. This can spread panic, incite violence, or manipulate public opinion, creating social and political instability.

Social Factors:

- Social Proof (*what my group thinks seems more true*): The tendency to conform to the beliefs and behaviors of others can lead to widespread acceptance of misinformation within social networks. This can amplify false narratives and create echo chambers, where misinformation circulates unchecked.
- Group Identity (*things that support who I am seem more true*): Misinformation that reinforces group identity can be especially persuasive, even when it contradicts factual information. This can deepen divisions and hinder collective action on issues like public health and climate change.

Source Credibility

- Trust and Familiarity (*information from a source I trust seems more true*): People are more likely to believe misinformation from sources they perceive as credible or familiar regarding another topic. This can be exploited by malicious actors to spread false information, undermining trust in genuine experts and institutions.

Cognitive Load:

- Stress and Overwhelm (*critical analysis is hard when I'm stressed*): When individuals are under cognitive load or stress, their ability to critically evaluate information diminishes. This makes them more likely to accept misinformation, which can be particularly problematic in high-stakes situations like elections or public health crises.

Psychological Needs:

- Cognitive Closure (*simple, easy answers seem more appealing*): The desire for quick and certain answers can make individuals more likely to accept misinformation that offers clear, concise explanations, even if they are false. This need for closure can prevent people from seeking out and considering more accurate, but complex, information.
- Belonging (*evidence that challenges group loyalties and beliefs is hard to accept*): The desire to fit in with a social group can lead individuals to accept and disseminate misinformation that aligns with the group's beliefs.

Information Overload:

- Digital Age Challenges (*internet information is difficult to sort through*): The overwhelming volume of information in the digital age makes it difficult to distinguish credible sources from unreliable ones. This overload can lead to reliance on mental shortcuts, increasing vulnerability to misinformation and eroding trust in legitimate information sources.

Digital Literacy:

- Skill Deficits (*trustworthy information takes skills to find*): Lack of digital literacy skills, such as the ability to critically evaluate online information and sources, makes it easier for misinformation to spread. This can perpetuate ignorance and hinder informed decision-making.

2. Strategies to Address Misinformation/Disinformation

The research from Newman, Swire-Thompson & Ecker underscores the importance of corrective feedback in reducing misinformation and highlights several factors that can enhance or hinder its effectiveness.

Corrective Feedback can be effective:

- Corrective feedback can reduce the belief in misinformation both in online and offline settings and interventions can be better designed to mitigate the spread and impact of false information.

Factors Influencing Effectiveness:

- Source Credibility: Corrections from credible sources are more effective.
- Repetition: Repeated corrections can reinforce the correct information.
- Clarity and Detail: Clear and detailed corrections are more likely to be accepted.
- Timeliness: Corrections issued soon after the misinformation is encountered are more effective.

Psychological Mechanisms:

- Memory Revision: Corrective feedback designed to help people recall and update their memories can help replace false information with more accurate details.
- Backfire Effect: In some cases, corrections can reinforce the misinformation, particularly if the false information aligns with the individual's existing beliefs or identity.
- Selective Exposure: People often consume information that aligns with their existing beliefs, which can make them less likely to encounter or accept corrective feedback.

Strategies to Enhance Correction:

- Prebunking: Providing warnings about potential misinformation before exposure can make individuals more skeptical of false information.
- Narrative Techniques: Using storytelling to convey corrections can make them more engaging and memorable.

- Engaging Trusted Figures: Leveraging influencers and respected figures to disseminate corrections can increase acceptance.

Practical Implications:

- The insights from this research can be applied in various domains, including public health, politics, and education, to design effective misinformation correction strategies.
- Organizations and platforms can use these findings to develop policies and tools that prioritize timely, credible, and clear corrections to combat misinformation.