Name of concept
Illusory truth effect

Key reference
(Hasher, Goldstein, & Toppino, 1977)

Description
The illusory truth effect covers how people are more likely to believe a statement they have heard before. The more often people are exposed to the same message, the more likely they are to see this message as truth, even if it is not factually true. Classic studies show this effect by exposing participants to multiple statements in multiple rounds, with some of the statements in later rounds being repetitions of those in earlier rounds. Participants tend to consider the repeated statements as more truthful than the statements that are presented to them only once.

Application within the field of cybersecurity
The illusory truth effect is closely linked to the field of disinformation and misinformation research (colloquially known as fake news). Especially with the online spread of disinformation through social media, people can easily be exposed to the same message multiple times, enhancing this illusory truth effect. The increased exposure can come from two sources: echo chambers and filter bubbles. Echo chambers are groups of people with similar views who bounce ideas off each other, which are then 'echoed' between them, as they are more likely to agree with the statements from likeminded people. This bouncing of ideas can be seen as multiple instances of being presented with the same information. Filter bubbles are created by tech companies using algorithms that present end-users with information they are likely to be interested in, based on earlier engagements with other pieces of information. Therefore, algorithms are more likely to repeat views that end-users have been exposed to in the past, also enhancing the illusory truth effect.

Annotated bibliography

Hasher, Goldstein, & Toppino (1977). One of the first studies to demonstrate the illusory truth effect. Participants were presented with statements and asked whether these were true or false in various rounds over time. Some of the statements were presented more than once, while others were presented only once. After seeing the same statements multiple times, participants rated these as more truthful compared to statements they had only seen once.

Pennycook, Cannon, & Rand (2017). This study investigated the illusory truth effect in relation to fake news. The authors found that repeated exposure caused people to consider the fake news stories to be more accurate. This finding holds even when stories are mentioned to be contested by people who act as fact-checkers. However, the authors also note a limitation of the illusory truth effect regarding fake news. If the story is extremely implausible, people are not more likely to believe these to be true after repeated exposure.

Wu (2022). This paper covers an online study to investigate how repetition of messages can invoke the illusory truth effect to cause people to believe fake news stories. With the study focusing on social media situations, where people get information through personalised

sources, the study found that in such a setting repetition does invoke the illusory truth effect, leading people to believe fake news stories more.

References

Hasher, L., Goldstein, D., & Toppino, T. (1977). Frequency and the conference of referential validity. *Journal of verbal learning and verbal behavior*, *16*(1), 107-112.

Pennycook, G., Cannon, T., & Rand, D. G. (2017). Implausibility and illusory truth: Prior exposure increases perceived accuracy of fake news but has no effect on entirely implausible statements. Unpublished Paper Manuscript, December, 11, 2017.

Wu, Y. (2022). Distinguishing the binary of news–fake and real: The illusory truth effect. *Journal of Applied Journalism & Media Studies*.