Fake or real? New study finds consumers wary of manipulated photos

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The chimera above was among the images shown study participants. Credit: Cuihua Shen, Mona Kasra, Wenjing Pan, *et al.*

In the age of fake news and doctored photos, wary consumers are not nearly as gullible as one might presume—especially if they have knowledge of social media, experience with the internet and are familiar with online photo-imaging tools. But the source of the images does not matter much as people evaluate what is fake and what is real, a University of California, Davis, study suggests.

In an online experiment with 3,476 people ranging from 20 to 87 years in age, researchers found that most people were able to correctly identify fake images, rating image credibility fairly low on a 7-point scale (1 being not credible at all, 7 being extremely credible). This was true even when they were told they came from The New York Times or NPR, or other known news organizations.

"We found that participants' internet skills, photo-editing experience, and social media use were significant predictors of image credibility evaluation," said the study's lead author, Cuihua (Cindy) Shen, professor of communication at UC Davis. "The results show that participants, no matter how careless or distracted they may be, can still be discerning consumers of digital images."

In previous studies, the source mattered

The findings, published in the journal *New Media & Society*, surprised researchers. Credibility of the source, and acceptance by others (those who hit buttons to share, like, "favorite" or retweet images), swayed photo viewers in previous studies, but not so much in the current study.

To ensure variance, researchers purposefully chose six fake images depicting a wide range of issues, including a photo of a same-sex couple with their family; a bridge collapse; a war image; and an animal genetically modified with a cat's head and a mouse's body.

The experiment was conducted for six consecutive batches of photos. The final compositions were presented to the focus study participants as mockups, similar to how they would appear on the web, showing the medium used to disseminate the images (Twitter, Instagram, Facebook, or email), and the source. The sources varied—from well-known media outlets such as BBC, FOX News and CNN—to general social media users with few (or many) followers. Images accompanied different commentaries or stories and, if applicable, revealed the number of viewers, likes, shares or retweets. Each study participant was shown one mockup.

Images were fake in that the content of each was purposefully cropped, changed, combined or repaired.

Study participants self-identified their experience with social media and knowledge of manipulation software, as well as demographic information.

Most participants, gathered through Amazon Mechanical Turk, reported having at least some college education.

"In the age of fake news and alternative facts, the risks and dangers associated with ill-intentioned individuals or groups easily routing forged visual information through computer and social networks to deceive, cause emotional distress, or to purposefully influence opinions, attitudes and actions have never been more severe," the study concluded.

Shen added that the results of the study suggest that more education in digital media literacy would help consumers to differentiate between fake and real images and information.

More information: Cuihua Shen et al, Fake images: The effects of source, intermediary, and digital media literacy on contextual assessment

of image credibility online, *New Media & Society* (2018). DOI: 10.1177/1461444818799526

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