

## **Written Representation 44**

Name: Ullrich Ecker  
Associate Professor  
Director, Community and Engagement  
School of Psychological Science  
University of Western Australia

Received: 26 Feb 2018

Singapore Parliament  
Select Committee on Deliberate Online Falsehoods  
Parliament House  
1 Parliament Place  
Singapore 178880

Perth, 25 February 2018

To whom it may concern,

- 1 I am writing after having been approached by the Select Committee on Deliberate Online Falsehoods as an expert on the psychology of misinformation processing. I have been conducting research into misinformation processing for about ten years, and have published extensively on the topic.
- 2 I have no financial interest in the subject matter of the Select Committee's inquiries. I may be willing to appear before the Committee to give evidence, depending on my schedule. I note that the statement below reflects my personal view, based on my research experience. It should not be taken as a statement endorsed by my employer.
- 3 Specifically, I was asked to comment on the following four questions:
  - (i) How our psychology can make us susceptible to misinformation;
  - (ii) How technology has caused our social environments to change, and the impact of technology on our susceptibility to misinformation;
  - (iii) How misinformation can affect one's decision-making or thinking, and what types of misinformation may have more influence than others; and
  - (iv) The challenges faced in correcting misinformation, and the various ways in which this problem can be overcome.

- 4 It is now well established that misinformation often continues to influence people’s memory, reasoning, and decision making even after people have received clear and credible corrections. In other words, just saying “that’s not true” typically does not eliminate the influence of misinformation.<sup>1</sup>
- 5 This effect can take many shapes. People may misremember a corrected “myth” as true; they may draw inappropriate inferences from the information they have received; they may make inadequate decisions based on misguided beliefs. Misinformation can make people feel more concerned or threatened by something than the evidence warrants.
- 6 It is important to note that this is at least in part a cognitive effect arising from failures of memory integration and memory retrieval. This means the effect occurs even in cases where people do not have a vested interest or motivation to believe one thing over another.
- 7 However, over and above the cognitive effect, misinformation can have particularly strong and persistent post-correction effects if people are motivated to believe the misinformation, that is, in cases where the misinformation is congruent to people’s worldviews.<sup>2</sup>
- 8 With worldview-congruent misinformation, corrections can sometimes even backfire and ironically increase people’s belief in the corrected misconceptions.<sup>2</sup>
- 9 Measurable effects can arise even from subtle misinformation, such as slanted news headlines.<sup>3</sup>
- 10 Misinformation has a stronger effect if it is repeated often, especially by different sources. This effect of repetition is not entirely offset by also repeating the correction.<sup>4</sup>
- 11 Both misinformation and corrections are more persuasive if they are plausible and come from sources seen as highly credible. Credibility relates more to perceived trustworthiness than perceived expertise; people often trust others if they perceive them to be similar to themselves, rather than putting trust into experts.
- 12 The effects of corrections can wear off relatively quickly over time. Once memory for the correction fades, people can return to accepting false claims as true simply because the false “myths” are familiar.<sup>5</sup>

---

<sup>1</sup> Lewandowsky, S., Ecker, U. K. H., Seifert, C., Schwarz, N., & Cook, J. (2012). Misinformation and its correction: Continued influence and successful debiasing. *Psychological Science in the Public Interest*, *13*, 106-131.

<sup>2</sup> Ecker, U. K. H., & Ang, L. C. (2017). Political attitudes and the processing of misinformation corrections. *PsyArXiv*, 10.17605/OSF.IO/48TCP

<sup>3</sup> Ecker, U. K. H., Lewandowsky, S., Chang, E. P., & Pillai, R. (2014). The effects of subtle misinformation in news headlines. *Journal of Experimental Psychology: Applied*, *20*, 323-335.

<sup>4</sup> Ecker, U. K. H., Lewandowsky, S., Swire, B., & Chang, D. (2011). Correcting false information in memory: Manipulating the strength of misinformation encoding and its retraction. *Psychonomic Bulletin & Review*, *18*, 570-578.

<sup>5</sup> Swire, B., Ecker, U. K. H., & Lewandowsky, S. (2017). The role of familiarity in correcting inaccurate information. *Journal of Experimental Psychology: Learning, Memory, & Cognition*, *43*, 1948-1961.

- 13 Corrections provide stronger reduction of misinformation if they provide an alternative explanation that can replace the misinformation, such as an alternative suspect B in a criminal case where a person A was incorrectly accused initially. <sup>6</sup>
- 14 Inoculating people against misinformation by explaining the strategies used by disinformants and exposing the logical flaws inherent in disinformation can reduce people's susceptibility to future misinformation. <sup>7</sup>
- 15 Social media and the advent of "Web 2.0" have exacerbated the issues associated with misinformation. While under some conditions, citizen journalism can promote truth and circumvent censorship or biased reporting by traditional media, there is also a lack of editorial gate-keeping and no commitment to journalism ethics and standards. Nonetheless, blogs and social media posts are seen by many as trustworthy sources of information.
- 16 It has become increasingly difficult even for experienced and well-informed news consumers to reliably distinguish valid information from misinformation. Indeed, development of sophisticated image and video editing software will make it more and more difficult to differentiate real news from fake news. Towards the end of 2016, the most popular fake-news stories garnered more engagement on social media than the most popular true news stories. <sup>8</sup>
- 17 Automated fact-checking and other forms of "technocognition" will be valuable tools to counter misinformation online. However, to the extent that disinformation is mass-produced and systematically spread with the aid of automation, this will remain an "uphill battle." <sup>8</sup>
- 18 Being bombarded with misinformation can have another psychological effect: It can cause people to stop believing in facts altogether and decrease their engagement in public discourse. The resulting confusion, cynicism, and information fatigue may be the ultimate goal of people systematically spreading disinformation. If trust in facts is eroded, if facts no longer matter or are even portrayed as "unknowable," then objective evidence becomes irrelevant and policy making is no longer constrained by reality. As Lewandowsky et al. (2017) put it: "Misinformation is therefore not just about being misinformed. It is also about the overall intellectual well-being of a society." <sup>8</sup>
- 19 I cannot comment specifically on the question of whether or not implementation of a law will be a successful tool to combat malicious disinformation attacks, especially if they originate from outside the country implementing the law. In general, in my humble opinion, such a law may also carry a risk, in that it may be misused in an attempt to silence legitimate dissenting voices or degrade freedom of speech and freedom of the press. Yet, in general, I believe a

---

<sup>6</sup> Ecker, U. K. H., Lewandowsky, S., & Tang, D. T. W. (2010). Explicit warnings reduce but do not eliminate the continued influence of misinformation. *Memory & Cognition*, *38*, 1087-1100.

<sup>7</sup> Cook, J., Lewandowsky, S., & Ecker, U. K. H. (2017). Neutralizing misinformation through inoculation: Exposing misleading argumentation techniques reduces their influence. *PLOS ONE*, *12*, e0175799.

<sup>8</sup> Lewandowsky, S., Ecker, U. K. H., & Cook, J. (2017). Beyond misinformation: Understanding and coping with the post-truth era. *Journal of Applied Research in Memory and Cognition*, *6*, 353-369.

disinformation law that appropriately targets malicious attackers and facilitates the removal of disinformation from the public sphere could be a useful instrument, as it may act as a deterrent to citizens, discourage the dissemination of disinformation, and limit citizens' exposure to false and misleading information. Its most valuable purpose, however, may be to act as a signal reinforcing the view that facts and evidence matter to the society and the leaders of the country in which the law is implemented.

Sincerely,

Dr Ullrich Ecker