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# Current Issues and Advances in Misinformation Research

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## Abstract

Every day, people are exposed to a vast amount of information. A significant portion of this information is false or misleading. This paper reviews current research on misinformation, including its effects on memory, decision-making, and social behavior. We discuss the role of cognitive biases and social factors in the spread of misinformation. We also explore potential interventions to reduce the impact of misinformation, such as media literacy training and fact-checking services.

## Keywords

misinformation, memory, decision-making, social behavior

Ten people died when a Metrolink commuter train collided with a Union Pacific freight train near Los Angeles in September of 2008 (Steinhauer, 2008). With millions of dollars in lawsuit payouts at stake, federal accident authorities



neuroimaging is elaborate and cutting edge, it has yet to provide a sure-fire way to confidently judge whether or not a particular person's memory is accurate.

## Protecting Against Misinformation Effects

Not surprisingly, some effort has been focused on ways to protect against the distorting effect of misinformation. One technique for improving the accuracy and completeness of an eyewitness's recollection is known as the *Cognitive Interview*, a set of rules and guidelines for interviewing eyewitnesses (see Wells, Memon, & Penrod, 2006, for a review). The CI recommends, for example, the use of free recall, contextual cues, temporal ordering of events, and recalling the event from a variety of perspectives (such as from a perpetrator's point of view). Also, the CI recommends that investigators avoid suggestive questioning, develop rapport with the witness, and discourage witnesses from guessing. In one recent study, subjects viewed an 8-minute film depicting a robbery (Memon, Zaragoza, Clifford, & Kidd, 2009). Later, subjects were given either a CI or a free-response control interview, followed by suggestive questioning about events not depicted in the film. Results indicated that, consistent with earlier findings, the CI produced more correct details than did the free-response procedure. One week after the interview procedure, subjects were given a recognition test for items in the video, and subjects incorporated details from the suggestive questioning into their memory for the event. Results showed that the CI deterred the effects of suggestion, but only when it came to the suggestive interview. Though the investigative process would ideally be free of all suggestive influence, a properly implemented cognitive interview may help protect the integrity of an eyewitness's memory.

## Related Lines of Research

In addition to the classic misinformation paradigm, researchers have developed other ways to demonstrate that even the subtlest suggestions can produce astonishing false witness reports. For instance, a handful of studies have emerged in which subjects are simply asked if they have seen video footage of well-known news events, when in fact no such video footage exists. One study found that 40% of a British sample was willing to report having seen nonexistent footage of a bus exploding in the 2005 London terrorist attacks (Ost, Granhag, Udell, & Hjelmstater, 2008). Of the subjects who claimed to have seen the footage, 35% described memories of details that they could not have seen. Another study (Sjoden, Granhag, Ost, & Hjelmstater, 2009) found that 64% of a Swedish sample claimed to have seen nonexistent video footage of an attack on the Swedish foreign minister, and 19% went on to describe details in the form of written narratives. The ease with which these studies elicited blatantly false memory reports is striking.

Research has also shown that suggestion can also shape autobiographical memory. Beginning with Loftus and Pickrell's *Lost in the Mall* study (1995), a series of studies have

successfully used personalized suggestion (or other suggestive techniques) to plant false memories of traumatic childhood events (Porter, Yuille, & Lehman, 1999), receiving a painful enema (Hart & Schooler, 2006), and even impossible events such as meeting Bugs Bunny, a Warner Brothers character at Disneyland (Braun, Ellis, & Loftus, 2002). These lines of research represent a broad area in their own right, with controversies and applications that are beyond the scope of this

Loftus, E.F., & Pickrell, J.E. (1995). The formation of false memories.