

Time

The greater the time between the original event and the misinformation, the stronger the effect of the misinformation. If the misinformation is given very soon after the original event, recall will be quite accurate. However, when there is a delay between the original event and the misinformation recall becomes less accurate.

Loftus et al (1978) showed 1242 student participants a series of slides depicting an accident involving a car and a pedestrian. Participants were then asked yes/no questions which contained information that was either consistent or inconsistent with the slides. For example, they had seen a car pull up at a 'yield' sign; half were asked, "Did another car pass the red Datsun while it was stopped at the yield sign?" (*consistent*) and the other half were asked, "Did another car pass the red Datsun while it was stopped at the stop sign?" (*misleading*). Some participants completed the recall questionnaire immediately after seeing the slides (*immediate*) and some after a delay of up to a week (*delayed*). All the participants were then given a final recall test. In the *immediate* group, the participants' accuracy improved over time (but only to chance level) whereas in the *delayed* group, the participants' accuracy decreased over time.

This is because the *immediate* group forgot both the original event and the misleading information at the same rate, so as time went by, the misleading information exerted less and less of an effect. But in the *delayed* group, the participants had lots of time to forget the original event but the misinformation was still fresh in their minds.

Centrality

The more central the misinformation is to the original event, the weaker its effect. If the misinformation is central to the original event, recall will be quite accurate. However, if the misinformation concerns peripheral details, then recall is likely to be inaccurate.

Sutherland and Hayne (2001) showed participants a video in which a child is separated from its caregiver whilst shopping. A police officer finds her and asks her who she is, before taking her to the police station, where she is collected by the carer. Participants were questioned about the video. Some of the questions contained information that was *consistent* with the video and some contained information that was *misleading* (e.g. some participants were asked about a *white* toy bear given to the child, which was in the video, and others were asked about a *green* toy bear, which was not). Some of the questions were about things that were of *central* importance to the main themes of the video (e.g. the toy bear) whereas other questions were about things that were of only *peripheral* importance (e.g. the colour of a shop assistant's shirt). Accuracy of recall was lower for the *peripheral* than for the *central* details. Accuracy for the *central* details was not affected by *misleading* information. However, for *peripheral* details, *consistent* information improved accuracy whilst *misleading* information increased the number of errors.

This is because *central* details receive more processing than *peripheral* details, which may not be processed at all. This leaves 'gaps' in the person's memory of the original event, which can then be filled by the post-event information.

Source reliability

The more trusted the source of the misinformation is, the greater the effect of the misinformation. If the misinformation comes from a reliable source, recall is likely to be inaccurate. However, if the source of the misinformation is thought to be unreliable, recall will be more accurate.

Dodd and Bradshaw (1980) showed 106 psychology students a series of slides depicting a car accident. One car struck the other's door, leading prominent dents. Immediately after viewing the slides, the participants answered a recall questionnaire. Some participants were asked *neutral* (non-misleading) questions. For other participants the questionnaire included misleading information about objects in the slides. For example, one question asked, "Could the bushes on the southeast corner have interfered with Car A's view of traffic approaching from the east?" when there were no bushes visible. The participants given the *misleading* questionnaire were divided into two subgroups. One group's questionnaires were given a heading indicating that they were prepared by the lawyer representing one of the drivers. Two days later, the participants were given another recall test. Accuracy was highest in the *neutral* group. In the *misleading* group, those who believed that the questions had been asked by Car A's lawyer were significantly more accurate than the group given no source for the questions.

This is because people are less receptive to information from others when they believe the other person has something to gain from it. This makes them more likely to detect misleading information and reject it before it contaminates their recall.

Awareness of misinformation

When people are warned that they may be deliberately misled, misinformation has a weaker effect. However, this only occurs when people are warned *before* the misinformation is given. If people are warned retrospectively that they have been misinformed, recall will be less accurate.

Greene et al (1982) showed 72 students a series of slides depicting a wallet-snatching incident, in which a woman walks down a street, stops to talk to a friend and is 'accidentally' bumped into by a man who, whilst stopping to help her pick things up, steals her wallet from her shopping bag. The slides were followed by a short paragraph read by the participants. This contained four items of misleading information (e.g. a brown truck that appeared in the slides was referred to as 'green'). Some participants were then warned that the information in the paragraph might be incorrect. This warning was given either (1) before the slides; (2) after the slides but before the paragraph; or (3) after the slides and the paragraph. A fourth group were given no warning. Participants were then given a recall test. Accuracy was higher in those given a warning than those given no warning but this increase was only significant if the warning was given before the paragraph was read.

This is because the warning causes people to process information more carefully whilst they receive it, making it more likely that misleading information will be detected. If they are warned after processing the misleading information it is too late, as the misinformation has already been encoded in their memories.