

Lost in the Supermarket: A Replication of Loftus and Pickrell (1995) on the Formation of False Memories



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Introduction

It is widely accepted that memories can be, to some degree, reconstructed¹. This finding stimulated research on the implantation of entirely new false memories. Loftus and Pickrell (1995) carried out the first published experiment on this topic, testing whether participants would accept the completely novel false event that they were lost in a shopping mall (shopping centre) at five years of age. They concluded a false memory rate of 25% from their sample of 24 participants. The present study was the first known attempt at replication.

The aims of the study were as follows:

A false memory rate between 15-35% would deem the replication a success.

The true memories would be richer than the false memories.

An exploratory analysis of the rate of false memories achieved over time would be conducted.

Method

- Participants: 123 participant pairs (participant and an older relative, i.e. informant); 42 male, 81 female; age range 18-57 years ($M=25.71$, $SD=6.97$).
- A longitudinal design with some within-participant variables was employed. Over four weeks, each participant completed a booklet survey and two interviews across which their formation of a false memory was measured. In both interviews, some within-participant measures were employed (e.g. clarity ratings for the true and false events).
- Informants provided three true memories from the participant's childhood and details of a credible shopping trip in order to create the false event. They also confirmed that the participant had not truly been lost as a child.
- Participants were told that the study was looking at "the kinds of things you may be able to remember from your childhood"², and were asked to discuss what they remembered from each of the four events (3 true, 1 false)
- Memories were classified as full when the participant remembered the whole event. A partial memory included "remembering parts of the event and speculations about how and when it might have happened"³.

References

- 1 Brewer (1986). In D. C. Rubin (Ed.), *Autobiographical memory*.
- 2 Loftus & Pickrell (1995, p.721). *Psychiatric Ann.*
- 3 Loftus & Pickrell (1995, p.724). *Psychiatric Ann.*
- 4 e.g. Heaps & Nash (2001). *J. Exp. Psychol.*
- 5 e.g. Hyman & Pentland (1996). *J. Mem. Lang.*

Results

- 35.2% of the false events were remembered after the second interview (8.2% fully, 27% partially).

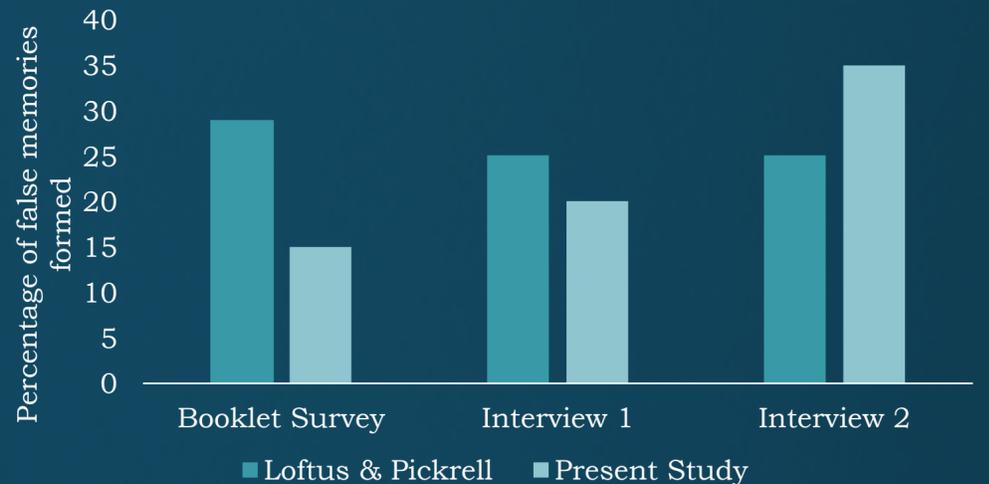


Figure 1. A bar graph displaying the percentages of false memories formed at various time points in the original study and the present study.

- There was a significant difference between the number of words used to describe true and false events ($t(17) = 3.56$, $p = .003$), with an average of 29.2 more words used to describe the true events than the false events.
- Clarity ratings were higher for the true events than the false events: a two-way repeated measures ANOVA demonstrated a main effect of event type on clarity ratings ($F(1,42) = 108.26$, $p < .001$, $\eta_p^2 = .72$), with much higher ratings for the true events ($M = 5.66$, $SE = .26$) than the false events ($M = 2.23$, $SE = .25$).
- At the beginning of the debriefing process when subjects were asked to select which event they thought was the false one, 84.6% correctly selected the pseudoevent.

Table 1. A Comparison of Results Between the Original Study and the Present Study.

	Loftus & Pickrell (1995)	Present Study
% true memories recalled	68%	87.1%
% false memories recalled	25%	35.3%
Mean words describing true memories	138	73.28
Mean words describing false memories	49.9	44.17
Mean clarity, true events	6.3	5.83
Mean clarity, false events	3.6	3.58
Mean confidence, true events	~4.4	4.22
Mean confidence, false events	~2.8	3.58
% false events correctly selected	79.17%	84.6%

Note. The confidence ratings from Loftus and Pickrell (1995) were measured on a five-point scale. For comparison reasons, these ratings were doubled to give approximate ten-point scale ratings as used in the present study.

Conclusions

- The replication was a success with 35.2% remembering the false event.
- In line with previous research, the true memories were richer than the false memories⁴.
- Following previous studies, there was a steady increase in the rate of false memories produced across time⁵.
- Limitations include possible misreports from informants that their child had not been lost in the shops when in fact they had been, impacting the confidence in results.
- The generalisability of the findings are limited by the nature of the false event and its plausibility.
- False memories can be implanted but we make no claim about the proportion of people who will recall them.