

Reconstructive memory and confabulation: a case study of students' reactions to a media-reported violent event

Michał Widacki, PhD

Andrzej Frycz Modrzewski Krakow University

ORCID: 0000-0003-0461-5101

e-mail: mwidacki@uafm.edu.pl

Abstract

The aim of the study was to determine the extent to which students create false memories relating to a non-existent recording of the moment when the porter was murdered at the University of Warsaw in May 2025. The experiment involved 100 students (76% women, $M = 21.1$ years), who were asked to complete a questionnaire on their recollection of the event and their sense of safety. As many as 90% of those surveyed said they had seen the video showing the moment the blows were struck, and 57% were able to provide details about it (the number of blows). The χ^2 tests revealed no significant differences between the genders ($p > 0.05$), although a trend was observed suggesting a higher prevalence of confabulation among women. Participants who confabulated were characterised by a slightly lower sense of safety ($F = 7.2$ vs 8.1 ; $M = 7.3$ vs 8.0). The findings support the reconstructive nature of memory and its susceptibility to suggestion in media-saturated contexts. This phenomenon is consistent with earlier studies in which between 55% and 63% of participants report having seen the non-existent footage of dramatic events.

Keywords: confabulation, reconstructive memory, false memories, suggestibility, eyewitnesses, media, forensic psychology

Introduction

Confabulation is a phenomenon involving the unintentional creation of false memories or the erroneous filling of memory gaps with coherent but factually incorrect information. Confabulation is therefore not the same as lying. In colloquial language, the term “confabulation” is commonly understood to refer to “making things up” or even “lying”. A lie, however, involves the deliberate communication of information known to be false, regardless of the form in which it is conveyed. For a statement to qualify as a lie, it must be intended to deceive the recipient of the message. Not every false statement is therefore a lie – it must be directed at someone and uttered with the intention of deceiving them. This implies that both denial of facts (“negative lie”) and fabrication of non-existent facts (“positive lie”) qualify as lying, provided that the person making the statement is aware of

its falsehood and intends to mislead the recipient of the message (Widacki & Dukala, 2015).

In the psychological literature, confabulation is linked to the reconstructive nature of episodic memory, meaning that memories are not a literal record of past events but are reconstructed during recall (Bartlett, 1932; Loftus, 2005). The recall mechanism makes memory particularly susceptible to suggestion, misinformation and the influence of emotions, as confirmed by research into the misinformation effect (Loftus, 2005; Loftus & Palmer, 1974).

From the perspective of intentionality, confabulation therefore differs fundamentally from lying. Ekman (1985) defines a lie as “*deliberately misleading another person without their awareness*”. Therefore, the essence of a lie is the intention to deceive the recipient of the message, whereas confabulation involves no intention to mislead anyone. A person who confabulates believes their

memories to be genuine. In other words, a lie is deliberate. However, confabulation is, by its very nature, unintentional and sincere.

For a fuller understanding of this difference, one may refer to the well-established classification by Pierre-Simon de Laplace, * * (1814/1951), who identified four types of testimony:

1. true and sincere – true both objectively and subjectively,
2. false and insincere – false both objectively and subjectively (a deliberate lie),
3. false, but sincere – objectively false, yet subjectively regarded as true,
4. true, but insincere – objectively true, but subjectively regarded as false.

The third type of testimony – “false, but sincere” – is a textbook example of confabulation (de Laplace, 1814/1951). In this case, the person is telling a lie in an objective sense, but subjectively they are convinced that it is true. The latter mechanism is of interest to cognitive psychology and the neuropsychology of memory, as it demonstrates how the mind can unconsciously construct alternative versions of events that appear to be true. This is also one of the reasons why the “Guilty Knowledge Test” (GKT) – known in Poland as the “Knowledge of the Act” test (Tarabula & Widacki, 2016) – is difficult to apply in polygraph examinations.

Aim of the study and hypotheses

The aim of the study was to investigate the extent to which witnesses confabulate, creating false memories of a non-existent video recording purportedly showing the moment the blows were struck during a violent incident that took place at the University of Warsaw in May 2025, in which a 22-year-old law student, Mieszko R., allegedly attacked a porter with an axe, inflicting fatal injuries. The woman died at the scene. The attacker also assaulted a campus security guard who tried to intervene, after which the attacker was subdued and detained. The Public Prosecutor's Office has charged the perpetrator with murder with extraordinary cruelty, attempted murder and desecration of a corpse. The court remanded him in pre-trial detention, which was subsequently extended, and the suspect was referred for psychiatric observation. The case received extensive media coverage.

Two short video clips relating to this incident went viral in the media. The first video shows the moment when the perpetrator is kneeling over the victim and tampering with her body, after having already attacked the woman. The second shows the moment he was subdued by the security staff at the campus. However, there is no footage showing the actual moment of the attack or the blows being struck. The case has been widely reported and discussed in the media on numerous occasions. It was decided to examine whether media reports can induce in individuals the belief that they personally witnessed the event described in the media in video footage. The hypothesis (H₀) assumed that confabulation would occur among participants and that

the video content would be supplemented with information from other sources (e.g. media reports).

Study sample and tool

The study involved 100 randomly selected students (N=100) selected. The group comprised 76 women and 24 men. Personal data (age, gender) and an assessment of their sense of safety on campus (on a scale of 1–10) were collected from them (see below).

The questionnaire included questions about the alleged recording of the moment of the attack.

Key questions regarding confabulation:

1. Have you seen an online video of Mieszko R. striking a woman at the University of Warsaw?
2. If you have watched the video online, does the footage show the attacker striking the woman with an axe?
3. If you have seen the video, how many axe blows did the attacker deliver?
 - One?
 - Two or three?
 - More than three?
 - A lot more than three?

For the purposes of this study, it was assumed that the following would be classified as confabulation: answering “Yes” to the question (1) or (2) and/or providing a number of blows in question (3) (any response other than “No”) was classified as confabulation.

Study procedure

The survey was carried out amongst fourth-year law students and second-year students of criminology and forensic science. The questionnaires were handed out during learning activities. Participants were informed that the questionnaire forms part of a research project, is anonymous, will not be assessed, and should be completed independently, without consulting any other persons.

Before the questionnaires were handed out, the students were asked whether they remembered a widely publicised incident that had taken place a few months earlier at the University of Warsaw. They were told that the questionnaire would relate to this event. However, no further information or suggestions were provided regarding the alleged recording of the attack.

The questionnaire design was based on instruments used in landmark studies on so-called “crashing memories” by Crombag, Wagenaar and van Koppen (1996), in which participants' susceptibility to forming false memories concerning non-existent media footage was examined.

Analysis methodology

The confabulation indices were calculated by assuming that giving a “Yes” answer to the key question constitutes confirmation of confabulation, and comparative analyses were conducted (gender, age, sense of safety). To examine the relationship between categorical variables, χ^2 tests of independence were calculated.

Results

Of the one hundred participants, ninety (90%) were convinced that they had seen footage of the moment of the attack¹ in which the perpetrator was striking blows. These people were asked a further set of questions (Group A):*“If you have watched the video online, does the footage show the attacker striking the woman with an axe?”* 57 out of 90 students answered “yes” to this question, which amounts to 63% of those surveyed. Further questions concerned the number of blows visible in the video; respondents could choose how many blows the perpetrator had struck (Group B): One; Two or three; More than three; A lot more than three. 51 respondents selected one of the above answers, which amounts to 57%. Mean age of the study group: 21.1 years; 76% of the study participants were women. In addition, the survey assessed participants’ sense of safety (on a scale of 1 to 10): Men (M) = 7.3 in the confabulating group vs Men (M) = 8.0 in the non-confabulating group. Among women, these values were F = 7.2 in the confabulating group and F = 8.1 in the non-confabulating group, respectively.

These differences suggest a slightly lower sense of safety amongst people who confabulate, regardless of gender, although this trend was slightly more pronounced amongst women. However, the χ^2 tests carried out for the variables “gender” and “confabulation” did not reveal any significant differences ($p > 0.05$), which implies that the observed effect is a trend rather than a statistically confirmed finding. Although not significant, the directional differences may indicate a slight relationship between a subjective sense of safety and susceptibility to the formation of false memories.

¹ It should be emphasised that the criterion adopted in this study for classifying a response as confabulation was broad. Even a simple “yes” answer to the question of having seen footage of the moment of the blows was sufficient for the respondent to be classified as confabulating. Consequently, the 90% figure should not be interpreted as a measure of the “force” of the effect in a cognitive sense, but rather as an indicator of susceptibility to accepting the suggestion contained in the question. The high proportion of affirmative responses may be partly due to the fact that footage relating to this incident – showing the perpetrator after the attack and the moment he was subdued – was indeed circulating in the media. Participants may have interpreted the question in a broader sense, assuming that they had “seen footage of the event”, understood generally as video material related to the case, and not necessarily a recording of the moment the blows were struck (which does not exist). This type of interpretation may have led to an overestimation of the exposure confabulation rate.

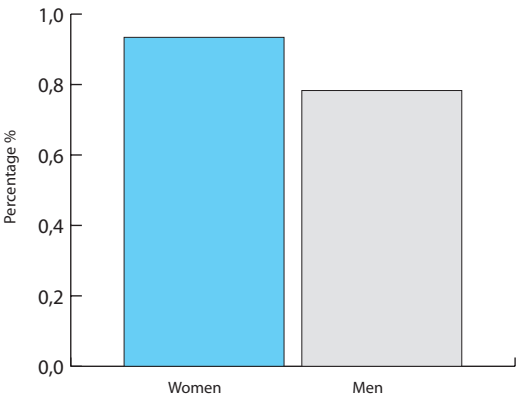


Fig. 1. Confabulation rate by gender (F/M)

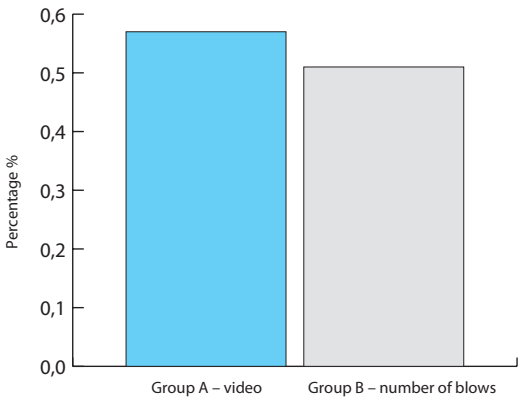


Fig. 2. The proportion of Group A (footage of the moment the blows were struck) and Group B (number of blows)

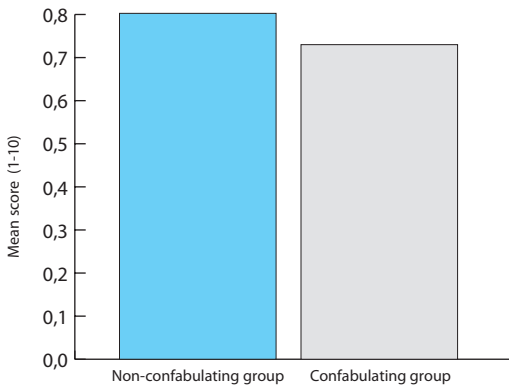


Fig. 3. Mean sense of security depending on the occurrence of confabulation

χ^2 tests of independence

To verify the relationships between gender and confabulation indices, χ^2 tests were conducted after restricting the sample to individuals identified as F/M:

Tab. 1. Gender (F/M) × Confabulation (0/1) – counts

	0	1
F	5	71
M	5	18

$\chi^2(1) = 2.955, p = 0.086$

Tab. 2. Gender (F/M) × Group A (0/1) – counts

	0	1
F	28	48
M	14	9

$\chi^2(1) = 3.247, p = 0.072$

Tab. 3. Gender (F/M) × Group B (0/1) – counts

	0	1
F	38	38
M	10	13

$\chi^2(1) = 0.096, p = 0.756$

In addition, the relationship between confabulation and a sense of safety was examined, after categorising the scores as ≤ 7 vs > 7 (on a scale of 1–10).

Tab. 4. Confabulation (0/1) × Sense of safety (≤ 7 / > 7) – counts

	≤ 7	> 7
0	3	7
1	44	45

$\chi^2(1) = 1.362, p = 0.243$

Discussion

A high rate of confabulation (90%) was observed, indicating the susceptibility of memory to reconstruction and suggestion under conditions of media exposure, understood as repeated contact with fragmentary, emotional, or incomplete media content (videos, posts, reports, comments) that may unintentionally influence the way an event is recalled. χ^2 tests for gender indicate a trend ($p \approx 0.07$ – 0.09) suggesting a potentially higher rate of confabulation among women compared to men; however, at the adopted significance level of $\alpha = 0.05$, the differences were not statistically significant, and the result therefore suggests only a trend. The relationship between confabulation and sense of safety after dichotomisation (≤ 7 vs > 7) was also not statistically significant ($p \approx 0.405$), although the means indicate lower levels of perceived safety in the confabulating group.

Limitations of the survey

The sample comprised 100 students and is probably not representative of the entire population. The categorisation of continuous variables (sense of safety) may have reduced the statistical power of the χ^2 test. The analysis was cross-sectional in nature; no causal inferences can be made. The possible and likely influence of external factors (the intensity of media coverage, group discussions) may have affected the reconstruction of memories. Header artefacts present in the original dataset were removed prior to analysis. Due to the small sample size, it is not possible to draw definitive conclusions regarding gender-related trends in confabulation; however, the obtained results ($\chi^2(1) =$

$3.247, p = 0.072$ and $\chi^2(1) = 0.096, p = 0.756$) can only be regarded as probable.

Conclusions

The findings of this study are consistent with the results of experiments carried out in other countries on collective memory of media events. Smeets and associates (2006) found that between 26% and 63% of Dutch respondents claimed to have seen a non-existent video recording of the murder of the politician Pim Fortuyn. Crombag, Wagenaar and van Koppen (1996) obtained similar results, with 55% of students claiming to have seen footage of the El Al 1862 plane crash, even though no camera had captured the moment of impact.

As in those studies, in our experiment the majority of participants (90%) reported a false memory of the recording’s existence, and more than half (51%) fabricated details about it (the number of blows stuck). This confirms that confabulation is not an isolated phenomenon but a recurring one, and that its prevalence in international studies ranges from 55–63%, which is consistent with the range of results obtained in the present sample.

It is worth noting that, as mentioned in the introduction, the high rate of confabulation in this study (90%) may be partly reinforced by the fact that footage showing the perpetrator kneeling over the victim immediately after the attack is indeed circulating in the media. However, these recordings do not show the moment the blows are struck; yet, due to their strong emotional impact, the realism of the scene and the media context, they may encourage viewers to “fill in the gaps” in their memory with missing details. As a result, the participants may unintentionally reconstruct the event as if they had witnessed the entire course of the attack — even though no such recording exists.

This mechanism is similar to that observed by Smeets et al. (2006) in their study of the murder of Pim Fortuyn, in which the mere presence of fragmentary media coverage increased the likelihood of participants developing false memories of a non-existent “video showing the moment the shots were fired”. Similarly, in our study, the combination of authentic yet incomplete footage and media narratives may also have reinforced the confabulation effect, leading participants to combine genuine visual material with an imagined sequence of events.

This confirms the hypothesis that, in high-profile criminal cases of a spectacular nature that have received extensive media coverage, the occurrence of confabulation (i.e. testimony that is objectively false) amongst potential witnesses is particularly common, which should prompt a particularly cautious assessment of such testimony.

It also confirms that a more serious problem for the law enforcement agencies and courts may be not deliberately false testimony, but testimony that is sincere, subjectively true, yet objectively false. In theory, the former can be effectively verified using both instrumental

and non-instrumental methods of detecting insincere communication. In the case of testimony based on confabulation, these methods are obviously ineffective.

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