

# New Evidence for the Similarity between Believed and Nonbelieved Memories from the Fading Affect Bias



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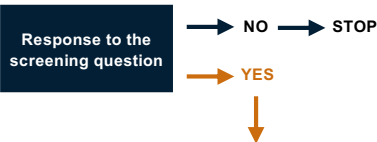
## BACKGROUND

The phenomenon whereby people remember events that they consider did not occur is known as a "nonbelieved memory" (NBM)<sup>2,3</sup>.

Several studies have examined the characteristics of NBMs by comparing them to typical autobiographical memories, referred to as believed memories (BMs). Although some phenomenological differences have been observed, NBMs are often experienced as "memory-like", despite the change in belief<sup>1,2,4</sup>.

## METHOD

Screened participants: N = 220 (132♀; age range: 20 – 58 years,  $M = 28.71$ ,  $SD = 11.47$ ).



### NBM

1. Event description
2. Age at the time of the event
3. Reason(s) for belief withdrawal
4. Age at belief withdrawal
5. Evaluation of belief, recollection, plausibility
6. Ratings of phenomenological characteristics

### Age-matched BM

Only steps 1, 2, 5, and 6 were completed.

## CONCLUSIONS

- Consistent with previous findings, NBMs and BMs were rated similarly on certain phenomenological characteristics (e.g., the spatial arrangement of objects and people), but differed on others, such as auditory and temporal details.
- Phenomenological ratings of both NBMs and BMs were only minimally influenced by the emotional valence of the events.
- The fading affect bias (FAB)<sup>5</sup> – i.e., the tendency for negative emotions to fade more than positive ones over time – was observed not only for BMs but also for NBMs. This finding extends previous research and suggests that the FAB holds even for memories that are no longer believed to have occurred.
- Taken together, these findings support the idea that NBMs and BMs closely resemble each other despite differences in belief.

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## OBJECTIVES

1. To examine whether the characteristics of NBMs are influenced by the emotional valence of events, as observed for BMs.
2. To assess whether emotional valence and intensity ratings follow similar patterns over time for both types of memory.

## RESULTS

### FREQUENCY AND GENERAL CHARACTERISTICS OF NBMS

**Frequency:** 93/220 (42.3%)

#### Valence of reported events:

- Positive:  $n = 35$
- Negative:  $n = 50$
- Neutral:  $n = 8$  (excluded from analyses)

#### Age at the time of the event:

$M = 9.22$ ,  $SD = 6.02$ , Median = 8, range = 1–28

#### Age at belief withdrawal:

$M = 17.9$ ,  $SD = 7.58$ , Median = 17, range = 7–52

### EFFECT OF EMOTIONAL VALENCE ON PHENOMENOLOGICAL CHARACTERISTICS

Event characteristics	Valence		Memory type		Interaction	
	Qa	p-value	Qb	p-value	Qab	p-value
Autobiographical belief	2.02	0.16	1036.56	<.0001	2.02	0.16
Clarity of representation	0.001	0.97	47.92	<.0001	0.81	0.37
Event plausibility	0.10	0.75	78.52	<.0001	0.10	0.75
Personal importance	2.01	0.16	15.81	<.001	2.87	0.09
Visual details	1.72	0.19	6.73	0.01	1.07	0.31
Sounds	0.03	0.87	19.60	<.0001	1.58	0.21
Smell and taste details	2.00	0.16	5.91	0.02	1.37	0.25
Location details	0.004	0.95	1.15	0.29	1.15	0.29
Arrangement of objects	3.43	0.07	3.76	0.06	0.47	0.49
Arrangement of people	0.13	0.72	0.07	0.79	1.22	0.27
Temporal details	0.57	0.45	18.03	<.0001	1.53	0.22
Representational format	1.53	0.22	10.42	0.002	0.12	0.73
Coherence	0.03	0.87	38.02	<.0001	1.78	0.19
Re-experiencing emotion	11.92	0.001	3.84	0.05	0.11	0.74
Reliving the event	7.45	0.008	2.98	0.09	2.14	0.15
Mental time travel	1.73	0.19	0.08	0.78	0.88	0.35
Similarity	8.18	0.006	15.21	<.001	0.42	0.52
Thoughts	0.77	0.38	0.44	0.51	0.65	0.42
Sharing	0.05	0.83	0.37	0.55	0.23	0.63
Visual perspective	0.52	0.47	0.82	0.37	0.50	0.48
Subjective distance	0.80	0.37	1.73	0.19	0.007	0.93

Table 1. Statistical parameters of the robust mixed ANOVA 2 x (Memory type: NBM vs. BM) x 2 (Emotional valence: positive vs. negative) for each event characteristic.

In rare cases where valence influenced phenomenological characteristics, ratings were higher for positive than for negative events.

When differences emerged between memory types, ratings of phenomenological characteristics were higher for BMs than for NBMs.

### EVOLUTION OF EMOTIONAL VALENCE AND INTENSITY RATINGS OVER TIME

A robust mixed ANOVA 2 x (Memory type: NBM vs. BM) x 2 (Emotional valence: positive vs. negative), conducted on difference scores between the time of the original event and the time of retrieval, showed that:

- Over time, the emotional valence of both NBMs and BMs faded more for negative events ( $M_{diff} = 1.70$ ) than for positive ones ( $M_{diff} = -0.36$ ).
- Emotional intensity also decreased more strongly for negative events ( $M_{diff} = -2.40$ ) than for positive ones ( $M_{diff} = -0.71$ ), for both NBMs and BMs.

## REFERENCES

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