

# A study about the effects of affective valence on a source-monitoring error: cryptomnesia



Beaufort, A.<sup>(1)</sup>, Brédart, S.<sup>(1)</sup>, Perfect, T. J.<sup>(2)</sup>, & Dehon, H.<sup>(1)</sup>

(1) University of Liège – (2) University of Plymouth



**Background** The emotional content of the to-be-remembered material could affect source monitoring accuracy as suggested by numerous studies<sup>2,3</sup>. Although inadvertent plagiarism is considered as a source monitoring error and is often linked to creative-emotional environments such as arts, the effect of emotional content on inadvertent plagiarism has never been investigated. Therefore, the objective of our experiment was to examine the possible impact of emotion on inadvertent plagiarism. Inadvertent plagiarism either when a person remembers an item and erroneously thinks that he/she was the generator of that item (RO task) or when the person erroneously thinks that he/she produces the item at the moment although, in fact, this item is a memory not recognized as such (GN task). According to the Paradoxical Negative Emotion hypothesis, negative emotion should capture attention toward central details of a situation and decrease attention toward peripheral details including the source of the encountered information. Consequently, cryptomnesia should increase when the to-be-remembered material is negative. In order to make our experiment as close as possible of the creative processes implicated in real-life, we used the Alternative Uses Task<sup>3</sup> in a slightly modified version of the Brown and Murphy classical paradigm<sup>1</sup>.

## Procedure<sup>1,2</sup>

### INITIAL GENERATION (2 participants together)

"Generate alternately original/non-conventional uses to the presented objects" (1 Positive, 1 Neutral & 1 Negative object)

For each orally generated idea, both participants made 3 judgments:

**Valence** (-3 "highly negative" → +3 "highly positive"), **Arousal** (1 "unexciting" → 6 "very exciting") & **Feasibility** (1 "unrealizable" → 6 "feasible")



A one-week delay

### RECALL-OWN TASK (2 participants separately)

"Recall as many ideas as you can that YOU personally produced last week."

Confidence rating and Remember-Know-Guess judgments

(1 = "Not sure" to 5 = "Sure I said that idea last week")

### GENERATE-NEW TASK (2 participants separately)

"Generate four new ideas for each object."

Confidence rating

(1 = "Not sure" to 5 = "I'm sure **no one** has produced that word last week")

## Participants

N = 96 (48 males) Mean age : 19 years Same-sex dyads

## Design

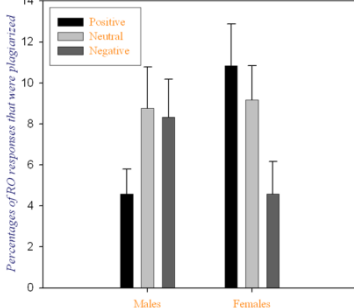
Mixed design : \*1 within-subject factor (3 valences)  
\*1 between-subjects factor (gender)

## Recall-Own Results Mean plagiarism rate : 7.71%

### Percentage RO Responses

	Positive		Neutral		Negative	
	Mean	SEM	Mean	SEM	Mean	SEM
Correct Responses	64.79	1.95	62.92	2.12	70.63	2.10
Intrusions	4.58	1.04	5.63	1.05	5.00	0.88

### Percentages of RO plagiarism for each emotional category and gender of participants



Interaction : Valence\*Gender  
( $F_{(2,188)} = 5.314, p = 0.006, \eta^2_p = 0.054$ )

Valence Effect : Women only

Negative vs Positive  
( $F_{(1,94)} = 10.1, p = 0.002$ )

Negative vs Neutral  
( $F_{(1,94)} = 3.985, p = 0.049$ )

## Confidence ratings

	Positive		Neutral		Negative		Mean
	M	F	M	F	M	F	
Correct R.	4.63	4.59	4.43	4.42	4.65	4.53	4.54
Intrusions	3	2.5	3.68	3.2	3.93	3	3.22
Plagiarism	3.89	3	2.87	2.83	3.44	3.78	3.3

$p < 0.01$

## Remember-Know-Guess judgments

Remember responses : Correct R. > Plagiarism and Intrusions

Know responses : Correct R. // Plagiarism // Intrusions

Guess responses : Correct R. < Plagiarism and Intrusions

## Generate-New Results Mean plagiarism rate : 15.21%

No gender effect

### Percentages GN Plagiarism

	Positive		Neutral		Negative	
	Mean	SEM	Mean	SEM	Mean	SEM
Plagiarism	17.49	2.28	18.84	2.12	9.29	1.86

( $F_{(3,94)} = 10.827, p = 0.001$ )

( $F_{(3,94)} = 13.546, p = 0.001$ )

### Percentages GN types of plagiarism

	Positive		Neutral		Negative	
	Mean	SEM	Mean	SEM	Mean	SEM
Self-Plagiarism	5.18	1.30	4.25	1.04	2.08	0.80
Other-Plagiarism	12.84	1.96	14.32	1.91	6.16	1.44

Self-plagiarism < Other-Plagiarism ( $F_{(1,94)} = 34.262, p = 0.000, \eta^2_p = 0.267$ )

## Confidence ratings

	Positive		Neutral		Negative		Mean
	M	F	M	F	M	F	
Correct R.	4.35	4.26	4.30	4.04	4.23	4.18	4.23
Plagiarism	3.01	2.89	2.61	2.89	2.77	2.54	2.79

$p < 0.01$

## Conclusion

The emotional content of the to-be-remembered material was found to affect the rates of plagiarism in the RO task for women only and for both gender in the GN task. That is, in the RO task, women plagiarized negative words less frequently than both positive and neutral words. The same pattern of results was observed in the GN task. These results do not support the Paradoxical Negative Emotion hypothesis<sup>2</sup> which predict higher rates of correct responses and plagiarism for negative materials.

## References

- <sup>1</sup>Brown, A. S., & Murphy, D. R. (1989). Cryptomnesia: delineating inadvertent plagiarism. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 15, 432–442.  
<sup>2</sup>Porter, S., Bellhouse, S., McDougall, A., ten Bricke, L. & Wilson, K. (2010). A prospective investigation of the vulnerability of memory for positive and negative emotional scenes to the misinformation effect. *Canadian Journal of Behavioural Science*, 42(1), 55–61. doi: 10.1037/a0016652  
<sup>3</sup>Stark, L.-J., & Perfect, T. J. (2006). Elaboration inflation: How your ideas become mine. *Applied Cognitive Psychology*, 20(5), 641–648. doi: 10.1002/acp.1216.

AB is supported by a grant from the Belgian FNRS.

TJP is supported by the ESRC.

Contact information: Aline.Beaufort@ulg.ac.be

