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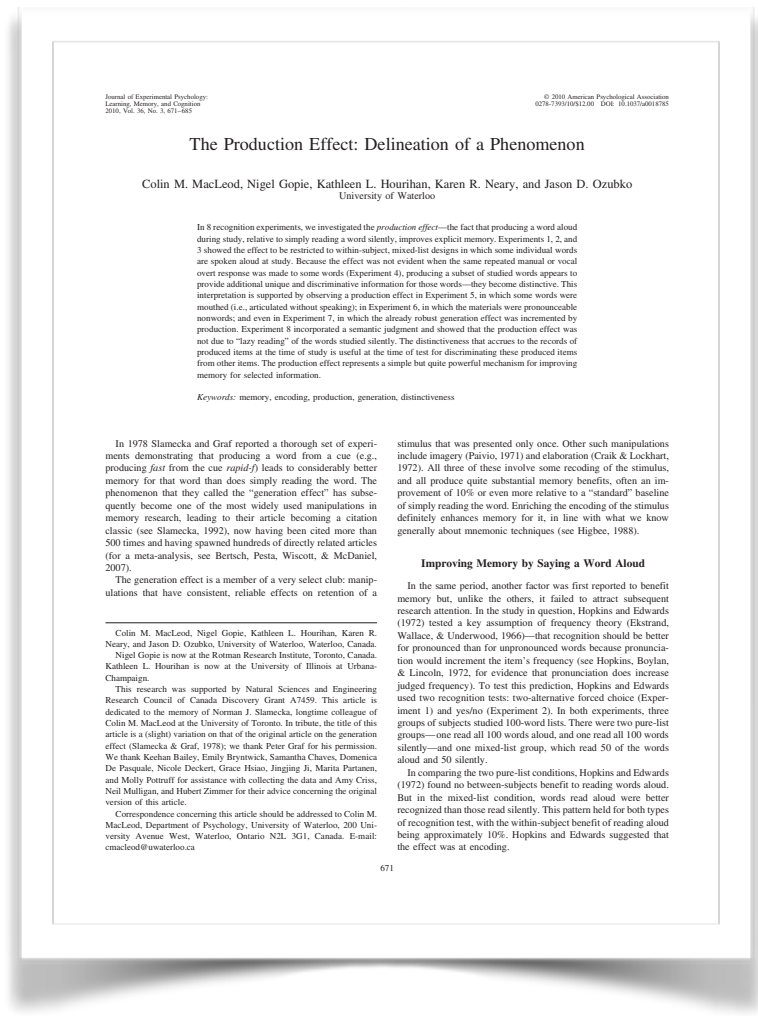
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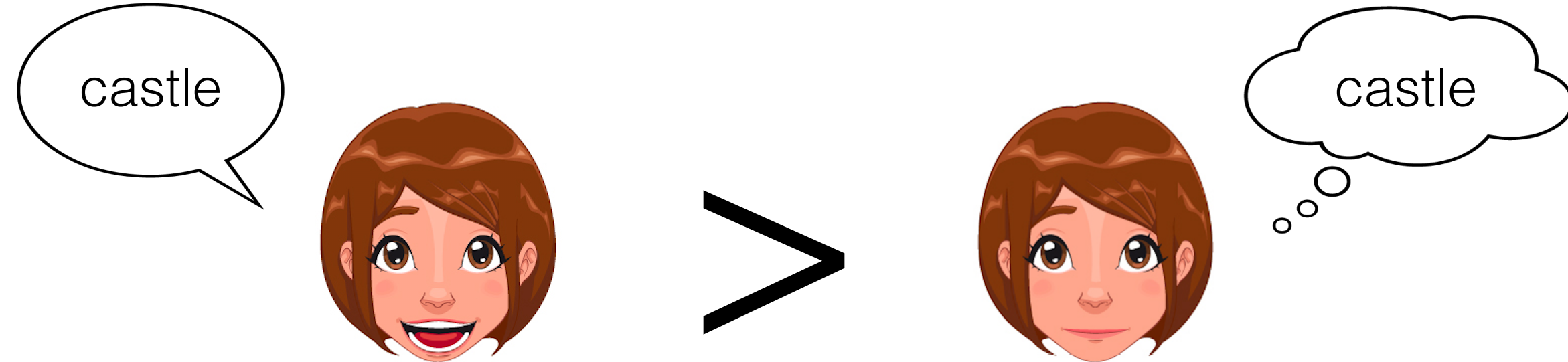
Is spelling memory improved by reading aloud ?

M. Gimenes & E. Lambert (University of Poitiers, France)

BACKGROUND



The production effect (MacLeod et al., 2010) : reading a word aloud allows for better memory performance than simply reading it silently



QUESTION

Does the production effect rely only on phonological representations or also on orthographic representations ?

EXPERIMENT 1

Phase 1: learning

pasteau

80 Targets



if the pseudo-word is white : I read it silently
if blue : I read it aloud

- 2s per item
- 25 participants

Phase 2: recognition

Correct answer : « Yes »

pasteau

80 Targets



Correct answer : « No »

ganud

40 Fillers
(phonologically and orthographically different from the targets)



Results

	Yes responses	RT
aloud	74 %	1.59 s
silently	43 %	1.87 s
fillers	18 %	

Production effect : 31 % ($p < .05$)

EXPERIMENT 2

Phase 1: learning

as in Experiment 1

- 30 participants

Phase 2: recognition

Correct answer : « Yes »

pasteau

80 Targets



Correct answer : « No »

paftau

80 Fillers
(differed by only 1 phoneme from the targets)



Results

	Yes responses	RT	Yes (targets) AND No (fillers)
aloud	59 %	1.97 s	34 %
silently	34 %	2.02 s	21 %
fillers	27 %		

Production effect : 13 % ($p < .05$)

EXPERIMENT 3

Phase 1: learning

as in Experiment 1

- 31 participants

Phase 2: recognition

Correct answer : « Yes »

pasteau

80 Targets



Correct answer : « No »

pastud

80 Fillers
(phonologically identical but orthographically different from the targets)



Results

	Yes responses	RT	Yes (targets) AND No (fillers)
aloud	62 %	2.12 s	28 %
silently	41 %	2.20 s	23 %
fillers	40 %		

Production effect : 5 % ($p < .05$)

CONCLUSION

Overall, the results showed that the production effect is mainly based on phonological information but it can be observed even when only orthographic information is available

REFERENCES

MacLeod, C. M., Gopie, N., Hourihan, K. L., Neary, K. R., & Ozubko, J. D. (2010). The production effect: Delineation of a phenomenon. *Journal of Experimental Psychology: Learning, Memory, Cognition*, 36, 671-685. doi: 10.1037/a0018785

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CREDITS

Vectors graphics designed by Freepik