

Morphological Decomposition: Deboosting Affixes Mara De Rosa & Davide Crepaldi



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BACKGROUND

Masked priming shows that morphologically complex stimuli (e.g., dealer-DEAL) elicit priming effects, regardless of their genuine morphological status (e.g., corner-CORN)¹ or lexicality (e.g., *bulber*-BULB)². The effect is supposedly triggered³ or boosted⁴ by the presence of an affix, resulting in a lack of facilitation for stimuli composed of a stem and a non-morphological letter-chunk (e.g., cashew-CASH).

Can affix frequency account for morpho-orthographic decomposition?

NONWORD PRIMES







Masked priming lexical decision task.



Strong **priming**, as indicated by a main effect of relatedness (F(1, 3953.2)=88.240, p<0.001), but no significant interaction with condition (F(2, 3953.6)=0.075, p=0.92).

Do affixes play a key role



during morpho-orthographic decomposition?



Masked priming lexical decision task.



Main effects of **relatedness** (F(1, 11902.9)=261.57, p<0.001), **condition** (F(4, 122.2)=2.90, p=0.02) and a significant **interaction** between the two (F(4, 11902.8)=15.30, p<0.001). Post hoc analyses show a graded pattern of facilitation, with the exception of the cashew-CASH items.

CONCLUSIONS

- Affix frequency does not drive morpho-orthographic decomposition.
- The presence of affixes does not always imply stronger priming, challenging the traditional theories of morphoorthographic decomposition^{3,4}.
- Word primes and nonword primes elicit comparable priming effects, questioning the role of lexical competition.

REFERENCES:

 Rastle, K., Davis, M. H., & New, B. (2004). The broth in my brother's brothel: Morphoorthographic segmentation in visual word recognition. *Psychonomic Bulletin* & *Review*, 11(6), 1090-1098. [2] Longtin, C. M., Segui, J., & Halle, P. A. (2003). Morphological priming without morphological relationship. *Language and cognitive processes*, 18(3), 313-334. [3] Taft, M. (1979). Recognition of affixed words and the word frequency effect. *Memory & Cognition*, 7(4), 263-272. [4] Grainger, J.,
Beyersmann, E. (2017). Edge-aligned embedded word activation initiates morpho-orthographic segmentation. In *Psychology of Learning and Motivation* (Vol. 67, pp. 285-317). Academic Press.



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This project has received funding from the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme Grant Agreement No 679010 STATLEARN ERC-2015-STG/ERC-2015-STG.