

BACKGROUND

In early models of visual word identification (e.g., Taft & Forster, 1975), affixes were thought to be **stripped off** in the course of lexical access. They did not serve lexical identification.

This has changed in more recent models (e.g., Baayen et al., 2011; Crepaldi et al., 2010; Seidenberg and Gonnerman, 2007; Taft, 1994), where stem morphemes and affixes have **similar representations** and the same relevance during visual word identification.

This new conception should predict similar effects among morphological relatives that share a stem (as in WORDLESS and WORDLIKE) and morphological relatives that share an affix (as in KINDNESS and WILDNESS).

An intriguing case in this respect is **masked priming**, which has been extensively documented between words sharing a stem (e.g., Drews and Zwitserlood, 1995), but not much between words sharing an affix.

PREVIOUS STUDIES

Duñabeitia et al. (2008) showed **masked suffix priming** in Spanish using both bare suffixes (as in *dad-IGUALDAD*, *ity-EQUALITY*) and complex words (as in *brevidad-IGUALDAD*, *brevity-EQUALITY*) as primes. This effect was reliably larger than in orthographic controls.

Dominguez et al. (2008) showed **masked prefix priming** in Spanish (as in *infeliz-INCAPAZ*, *unhappy-UNABLE*). Again, the effect was reliably larger than in orthographic controls.

However, Chateau et al. (2002) **did not find any prefix priming** in English: DISLIKE did yield time savings in the identification of DISPROVE, but these were not larger than in orthographic controls like violin-VIOLATE.

Duñabeitia et al. (2008) and Dominguez et al. (2010) used monomorphemic words as unrelated primes, whereas Chateau et al. (2002) used unrelated prefixed words. Thus, we don't know whether the different results come from **different languages** or from **different control primes**.

METHODS - I

- ⊙ 48 participants, all skilled readers of English.
- ⊙ Lexical decision task, three-field paradigm, SOA=42 ms.
- ⊙ 72 word targets (36 monomorphemic + 36 complex).

REFERENCES

prefixes to morphological processing of Spanish words. *European Journal of Cognitive Psychology*, 22, 569-595 -- **Drews, E.** & Zwitserlood, P. (1995). Evidence for a distributed connectionist approach to morphology. *Journal of Experimental Psychology: General*, 136, 323-345 -- **Taft, M.** (1994). Interactive-activation as a framework for understanding morphological processing. *Language and Cognitive Processes*, 9, 271-294 -- **Taft, M.** & Forster, K. I. (1975). Lexical storage and retrieval of prefixed words. *Journal of Verbal Learning and Verbal Behavior*, 14, 638-647.

METHODS - II

- ⊙ Each target paired with three **nonword primes** made up of an existing stem and either:
 - ✧ the same final as the target (which is the suffix when the target is complex) [e.g., altar**ly**-STEEPLY, sport**el**-BROTHEL]
 - ✧ an existing suffix, different from that of the target [e.g., altar**ic**-STEEPLY, sport**ic**-BROTHEL]
 - ✧ an all-letter-different non-suffix [e.g., altar**fu**-STEEPLY, sport**ur**-BROTHEL]

RESULTS

Descriptive stats

altar ly -STEEPLY: 677 [SEM = 18]	sport el -BROTHEL: 690 [SEM = 17]
altar ic -STEEPLY: 713 [20]	sport ic -BROTHEL: 707 [23]
altar fu -STEEPLY: 698 [21]	sport ur -BROTHEL: 698 [20]

Mixed-effects model

- ⊙ **Morphology** (simple vs. complex targets) and **relatedness** (same final vs. different, suffix vs. different, non-suffix) as independent variables
- ⊙ **Interaction** between morphology and relatedness ($F[2,3048]=3.57, p=.03$):
 - ✧ **No effect** in the simple-target conditions ($F[2,1538]=.79, p=.45$)
 - ✧ **Same suffix quicker** than unrelated controls ($\beta=-.04, t[1506]=-2.31, p=.02$) and **different suffix slower** than unrelated controls ($\beta=.04, t[1506]=2.11, p=.03$) in the complex-target conditions

DISCUSSION

Clear evidence for **masked suffix priming**, over and above orthographic effects. Support for recent models of the visual identification of complex words that suggest **similar importance** for affixes and stem morphemes in lexical access.

At least when nonword primes are used, **no issues about control primes**: suffix priming holds both against unrelated suffixes and non-suffixes.

When the target is complex, unrelated primes with a morphological structure imply time costs. **Competition** between suffixes? **Inconsistent blending** of primes and targets?