Morphological superstates and the processing of two-constituent words in English and French

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In most approaches to morphology, words such as disjoint, profitable, and automobile would be straightforwardly described as containing two morphemes and thus have the structure dis-joint, profit-able, and auto-mobile respectively. Yet, recent on-line morphological processing research has revealed that the extent to which putative morphological constituents play a role in lexical processing depends on the interplay of a variety of stimulus and participant factors (Gagné, 2017).

We report on a study of morphological processing in English and French that has sought to understand these factors by creating a cross-linguistic lexical recognition and production study in which stimuli were matched perfectly across languages, but in which lexical statistical properties and participant properties were free to vary. This was done by conducting separate experiments in English and French that used identical stimuli (ones that had the same visual properties across the two languages).

The core stimuli in our study were 100 English-French cognates that are written using the exact same letters in the two languages (i.e., no accents and no silent letters). Stimuli were either morphologically simple (e.g., balance, sardine), prefixed (e.g., disjoint, incorrect), suffixed (e.g., maturation, profitable), or composed of two stems (e.g., automobile, horticulture). This last category of stem-stem stimuli was employed to substitute for bimorphemic compounds which cannot be visually identical across English and French, for reasons of both orthography and head-modifier sequencing.

Eighty participants (forty native speakers of French and forty native speakers of English) participated in the experiment and were tested in unilingual contexts. The study employed a combined recognition-production paradigm in which participants recognized words in a progressive demasking task (Grainger & Segui, 1990) and then typed them (Libben, Curtiss & Weber, 2014).

In both the progressive demasking recognition task and the typing task, there was clear evidence of morphological structure. The typing data show sensitivity to morphological constituency such that letter typing latencies increased at putative morpheme boundaries. These effects were, however, modulated by both constituent and whole word properties and their differences across the two languages. Moreover, we found that morphological effects in typing wax and wane depending on the region of the word in which typing latency measures were taken.
We conclude that these data support a *morphological superstate* perspective in which the morphological structure of a word can be best seen as specifying opportunity for morphological activation. The extent to which that activation actually takes place appears to depend on both task-specific and participant-specific factors.

In our view, the morphological superstate perspective that is supported by the data that we have obtained is incompatible with the assumption that multimorphemic words can be assigned invariant formal morphological descriptions. We suggest that these data support a view of morphological representation in the mind in which words do not have fixed representations, but rather the potential for dynamic restructuring in accordance with language experience.

**References**

