

**Same words, different languages:
Examining English-French written word recognition and production**

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An important goal of psycholinguistic research is to understand the extent to which language behaviour is affected by the formal properties of language elements. In this study, we focused on a particular set of formal properties—those associated with the morphological structure of bimorphemic words in English and French. The goal of the study was to understand how this morphological structure interacts with language-specific and participant-specific factors in the on-line recognition and production of words.

A considerable amount of psycholinguistic research has shown that lexical processing depends on the interplay among stimulus, language, participant, and task factors (Gagné, 2017). Accordingly we sought to create an experiment in which these factors could be teased apart. The key to our experiment design was the use of visually identical stimuli in English and French. An example of such as word is *maturation*. although the word is pronounced quite differently in English and French, it is spelled exactly the same and has exactly the same morphological structure in both languages. This enabled us to create separate experiments in English and French and to ask (a) whether patterns differ in English and French, (b) whether effects differ across recognition and production, and (c) whether bimorphemic word classes differ from each other.

The core stimuli were 100 English-French cognates that are written using the exact same letters in the two languages (i.e., no accents, no silent letters). Stimuli were morphologically simple (e.g., *balance*), prefixed (e.g., *incorrect*), suffixed (e.g., *maturation*), or composed of two stems (e.g., *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 within each language. Stem-stem words (e.g., *horticulture*) showed the strongest morphological effects. We also found that morphological effects in typing wax and wane depending on the region of the word in which typing latency measures were taken. We see this methodological finding as having consequences for further experimentation using this paradigm.

The key outcome of this research is that it provides evidence of an effect of morphological sensitivity both across tasks and across languages. Yet, this effect is modulated by experience-specific factors that suggest that individual's processing of words is finely tuned to accord with his or her individual language use across the lifespan.

References

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