

Timing and priming morphological processes during spelling.



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To explore the nature of morphological processing during spelling, two studies examined the effects morphological structure and priming. In both studies, participants completed an auditory lexical decision task which contained root word primes (e.g., art) for half of the words subsequently spelled. Spelling items included matched pairs of multi-morphemic and mono-morphemic words (e.g., artist-article). The dependent variables were spelling accuracy and handwriting latencies before and during spelling. Study 1 was a delayed copying task (spelling with visual prompts). 20 adults and 46 children (8-12 years) were faster to begin writing multimorphemic words (e.g., artist) than mono-morphemic words (e.g., article). Adults showed effects of morphological priming and effects of morphological structure on latencies during spelling production, but children did not. Study 2 was a spelling to dictation task (spelling with auditory prompts). Preliminary results from 20 adults and 72 children (9-12 years) again suggest morphological facilitation before spelling begins, with analyses of the effects during spelling ongoing (results will be presented in full). The findings indicate that multiple morphological processes influence spelling. To fully understand the role of morphology, we need to distinguish between processes used during lexical access and those used during spelling production.

An experimental investigation of the cultural evolution of informative writing systems.



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Opaque spelling systems, such as that of English, place additional demands on learning but may confer certain benefits in the context of reading. For example, the heterographic homophones (e.g., and) are hard to learn but reduce ambiguity. Might it be the case, then, that heterography - and therefore orthographic opacity - may sometimes be selected for in the evolution of writing systems? We investigate this question by experimentally simulating the evolution of orthographic systems, both with and without communicative pressure for ambiguity avoidance. Additionally, we consider two mechanisms by which informative heterography might be selected for: differentiation, in which new spellings are created to differentiate homophonous words (e.g., from to signal low-fat), and conservation, in which heterography arises as an epiphenomenon of sound change (e.g., and, which resulted historically from the /ɛ:/-/e:/ merger). Our results show that, under learning pressure, orthographies may become transparent, while under communicative pressure, they may become informative, diverging from the spoken language to express meaning directly. Moreover, our findings suggest that, in the written modality where interlocutors are separated in time and space, differentiation does not represent a good model of heterography emergence.