

Morphological processing of Hebrew verb classes in native and non-native populations: A masked priming study

Previous research suggests that access to morphological and morphosyntactic information from visually presented words under masked-priming conditions might not be fully operational in adult second language (L2) learners, relative to native (L1) speakers (e.g., Silva and Clahsen, 2008). We extend this research to a previously unconsidered language type, Semitic, by reporting results from the first masked-priming study comparing L1 and L2 Hebrew. Inflected verb forms in Hebrew comprise a (consonantal) root and a (vocalic) word pattern, the latter taken from seven verbal classes called binyanim. We compared the two most common binyanim, the highly productive 'Piel' and the unproductive 'Paal' in two form types, finite (1sg.past) and non-finite (infinitives) verb forms. We tested whether these forms facilitated the recognition of targets sharing the same root (belonging to binyan 'Hitpaal'), which indicates morphological decomposition 'down to the root' in lexical access. From previous research, we expected to find full decomposition for L1 speakers of Hebrew (e.g., Deutsch, Frost & Forster, 1998). If L2 processing, by contrast, relies less on morpho-orthographic decomposition, we should find reduced root-priming effects in L2 Hebrew.

We used the visual masked-priming technique (Forster, Mohan, & Hector, 2003), testing 30 L1 and 46 highly proficient L2 learners of Hebrew. There were two Form Type conditions (1sg.past, infinitive), each with three Prime Types ('Paal', 'Piel' and 'Unrelated'), presented for 50 ms immediately before target words (see Table 1). The results revealed a significant three-way interaction between Form Type, Prime Type and Participant Group indicating L1/L2 differences in morphological priming. While L1 speakers showed the same priming pattern for both Form Types, with a significant root-priming effect for 'Piel', but not for 'Paal', the L2 group showed a different pattern, with priming only from non-finite forms and no contrast between 'Piel' and 'Paal'.

Our results indicate that L1 access of inflected verbs in Hebrew engages fully decomposed representations, but only for the productive 'Piel' class. Access to 'Paal' verbs, on the other hand, appears to be mediated by stored stems from which the root is less directly available. In contrast, L2 speakers of Hebrew are not sensitive to the subtle 'Paal'/'Piel' morphological contrast and access the root only in non-finite forms. These results suggest that there are differences between L1 and L2 processing of complex words, with non-native speakers showing reduced sensitivity to abstract morphological and morphosyntactic information at the early stages of lexical access.

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