

Do Late L2 Learners Use Inflectional and Derivational Affixes to Integrate Novel Words in Sentence Reading?

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Previous masked priming research has suggested that late second language (L2) learners show less automatic processing of inflected compared to derived forms [1]. In these studies, words are presented in isolation, which might impede processing of inflected words more than that of derived forms as the sentence context that triggers the formers' morphological form (e.g., plural -s is required after numerals higher than 1; past tense -ed when an event happened in the past) is missing while derived forms can more easily be understood in isolation. Nevertheless, as derivational suffixes encode word class, these can aid integration of incoming material during sentence processing as well. However, suffixes may differ with respect to how reliably they provide word class information: For instance, -ous is very reliable (99.1% of all -ous words are adjectives; Ulicheva et al., 2020), whereas -ist is less categorical (with 85.4% nouns and 14.1% adjectives). The present study presents novel words with inflectional and derivational affixes in congruent and incongruent contexts, investigating if late L2 learners of English are sensitive to how morphological endings fit into the sentence context.

In an eye-tracking during reading study, 47 advanced L2 learners of English with German as L1 read novel words in singular vs. plural (inflectional set) and adjective vs. noun (derivational set) contexts respectively. The word preceding the novel word constitutes the only difference between the sentence context pairs: Plural vs. singular numerals (e.g., *ten* vs. *one* in (1)) in the inflectional and adverbs vs. determiner + adjective (e.g., *incredibly* vs. *an incredible* in (2)) in the derivational contexts. The novel words were affixed with plural -s (e.g., *fruttles*) or the agentive suffix -er (e.g., *fruttler*) and adjectival -ous (e.g., *blapous*) or nominal -ist (e.g., *blapist*) respectively. The affix -er was chosen because it denotes people or gadgets (e.g., *baker*, *printer*), thus resulting in a countable (compared to a mass) noun that should receive plural marking in a plural context. LMER models revealed that participants took longer to read overtly plural-marked forms such as *fruttles* in incongruent singular ($t=2.867$) and adjectival forms like *blapous* in incongruent noun contexts ($t=3.611$, see Fig. 1). For singular forms with -er and nominal -ist words, there were no significant differences between the two contexts, though ($t<0.086$).

The results show that late L2 learners' processing is slowed down when plural marking is present in non-licensed singular contexts, while missing plural markers in plural contexts (with numerals) do not disrupt reading. This suggests that late L2 learners compute the plural affix's function when actively encountering it but do not penalise the absence of this marking in obligatory contexts (mirroring common omission errors in L2 production). For derivational affixes, late L2 learners have more difficulties integrating novel words with near-categorical suffixes in incongruent context (-ous as noun) than novel words with affixes that allow for more than one word class (-ist as noun or adjective). In conclusion, late L2 learners are sensitive to properties of morphological forms and how these integrate into sentence contexts.

Materials

Inflectional set:

(1) The children saw many rare animals at the zoo last month. In the Australian section, they counted eight koalas and...

a. ...ten *fruttles/fruttler*...

b. ...one *fruttles/fruttler*...

...for their list of Australian animals.

Derivational set:

(2) Bob is waiting for his first international flight. Nervously, he approaches a stewardess who is...

a. ...incredibly *blapous/blapist*...

b. ...*an* incredible *blapous/blapist*...

...although he brings a long list with technical questions.

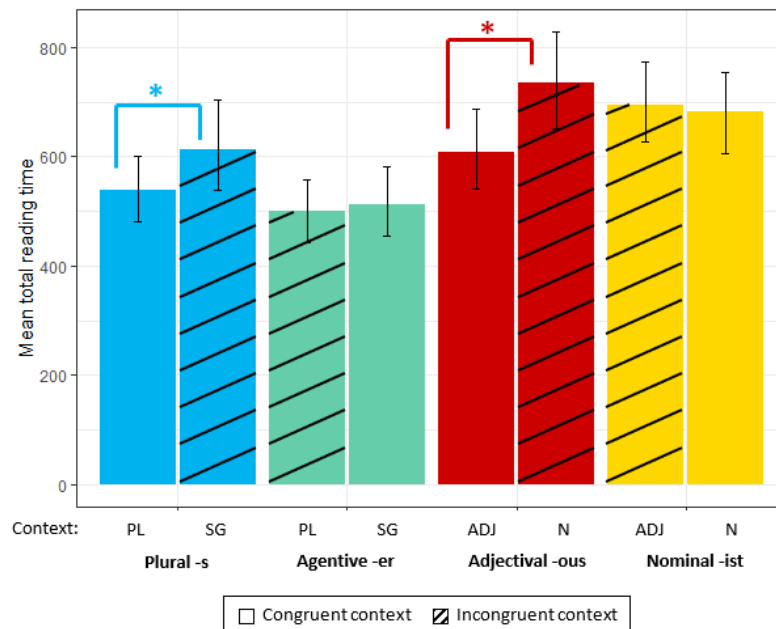


Figure 1: Total reading times of the novel word in the different contexts.

References

- [1] Jacob, G., Heyer, V., & Veríssimo, J. (2018). Aiming at the same target: A masked priming study directly comparing derivation and inflection in the second language. *International Journal of Bilingualism*, 22(6), 619–637. <https://doi.org/10.1177/1367006916688333>
- [2] Ulicheva, A., Harvey, H., Aronoff, M., & Rastle, K. (2020). Skilled readers' sensitivity to meaningful regularities in English writing. *Cognition*, 195, 103810. <https://doi.org/10.1016/j.cognition.2018.09.013>