

Acoustic duration and typing timing – same, same... but different?

Background & Motivation

- growing evidence that typing is modulated by a range of (sub)lexical variables (e.g., [1]-[9])...
- ... which suggests interaction of central and peripheral processes for typing **comparable** to what we find in **speech** (e.g., [3] & [9])
- BUT** mixed conditions often muddle effects (e.g., [4], [11]& [12]) and
- no direct comparison yet**

The Experiment

- online **pseudoword** production experiment adapted from Schmitz et al. (2021)
- immediate sentence **copying** paradigm (visual stimulus)
- 4 types of S**: non-morphemic, plural, is-/has-clitics

Analysis

- 121 participants x 48 target words – all erroneous targets = **4877** data points
- generalized additive models [13] with
 - dependent variable: **log transformed IKI**
 - predictor of interest: **type of S**
 - also included: typing proficiency (training, hand watch, mean speed), key distance, trial number
 - random effects: fingers, participant, pseudoword length & pseudoword

Hypotheses

- nm = pl = has = is (Feed-forward)
- nm ≠ pl ≠ is ≠ has (Emergence)
- nm > pl > is = has (Same same)
- nm < pl < is = has (Same different)

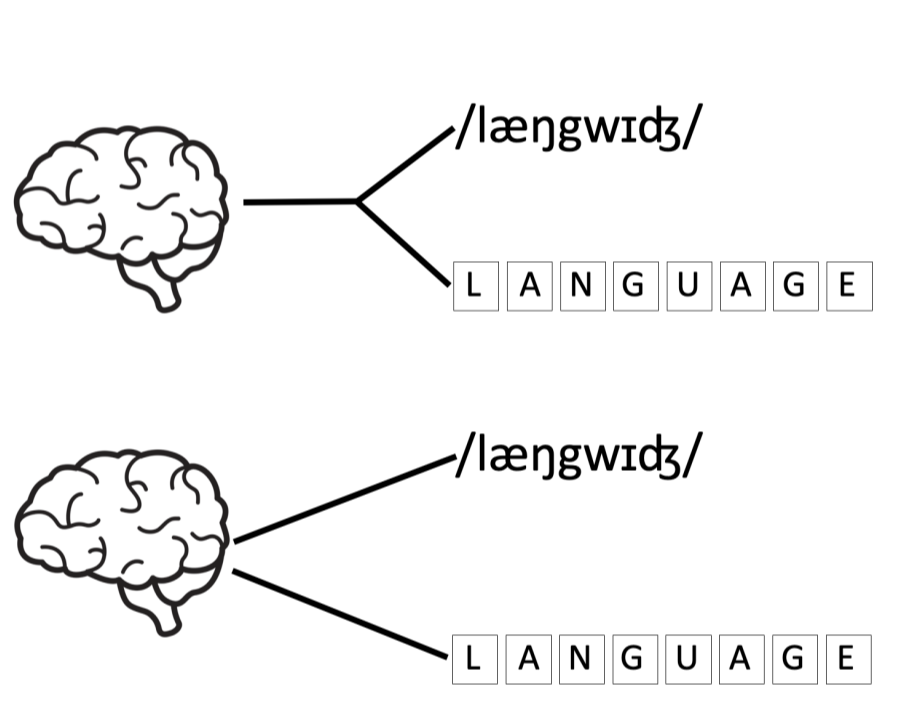
Stimuli

This creature is a glips. Look, this is a blouts.

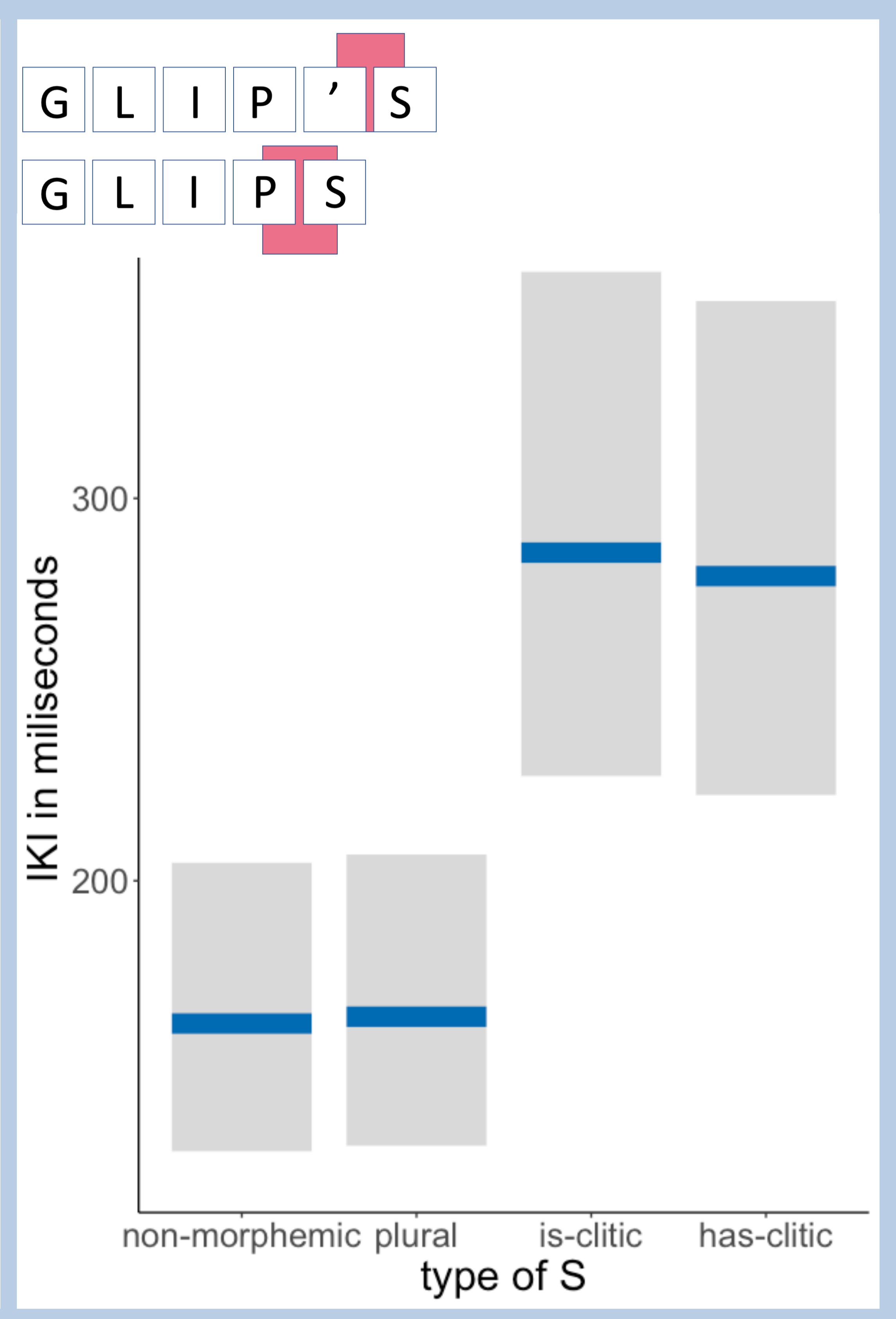
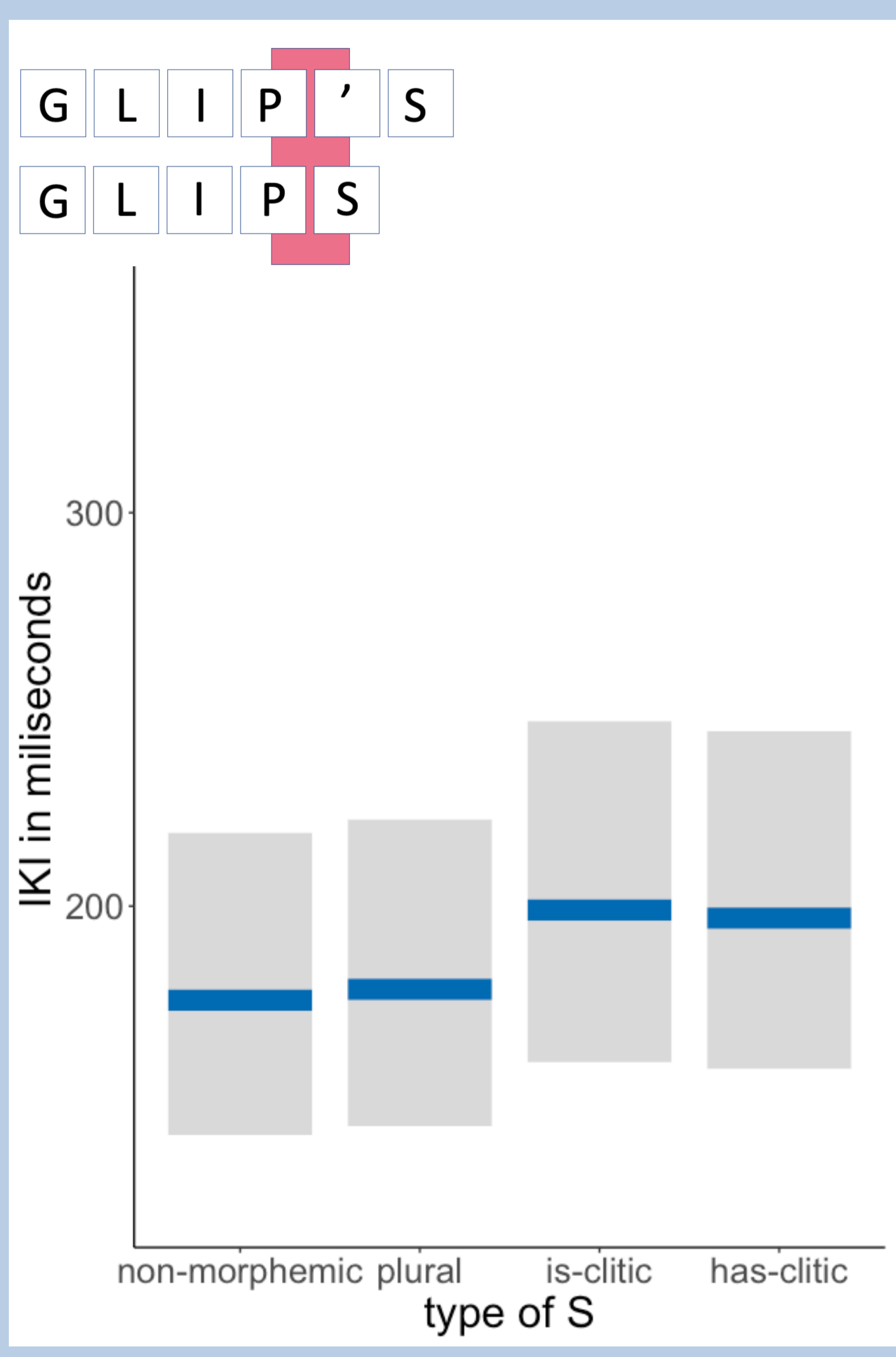
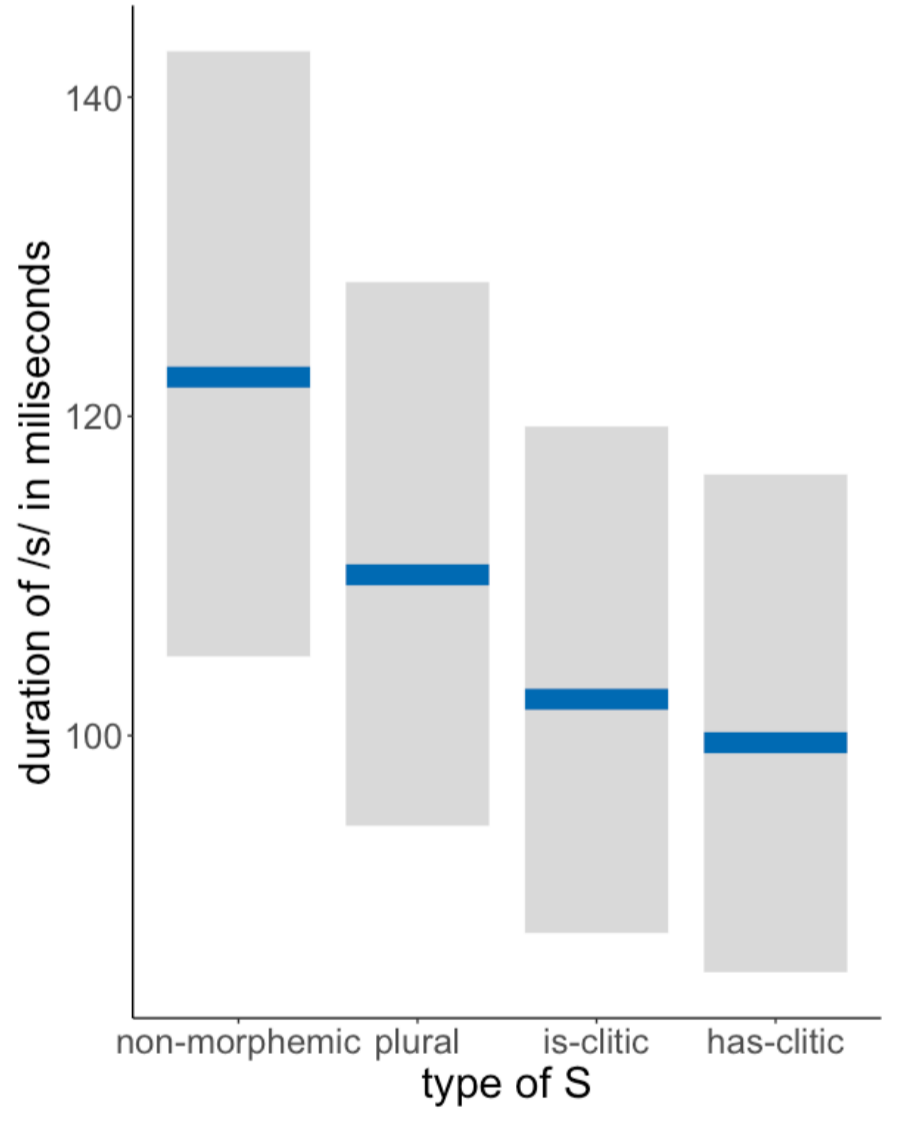
Every day, the glips plays with the blouts.

What happens every day?

Typing = Articulation?



Articulation: Findings



Discussion

Typing and articulation are **not the same** – yet not entirely different...

- nm = pl = has = is (Feed-forward) **X** • no difference between non-morphemic and plural S
- nm ≠ pl ≠ is ≠ has (Emergence) **✓** • clitics > non-morphemic, plural S
 - pure motor disruption?
 - comparison of C > ` and ` > S transitions speaks against that
- nm > pl > is = has (Same same) **X** • underlying word boundary effect?
 - previous research suggests (e.g., [4],[7] & [12]) **different processing units** (i.e., words and syllables) appear to be more relevant in written language production
- nm < pl < is = has (Same different) **✓** • both confounding factors should be eliminated by future research

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