

INTRODUCTION

Lexical access is faster in individuals with larger vocabularies compared to individuals who know fewer words [1,2].

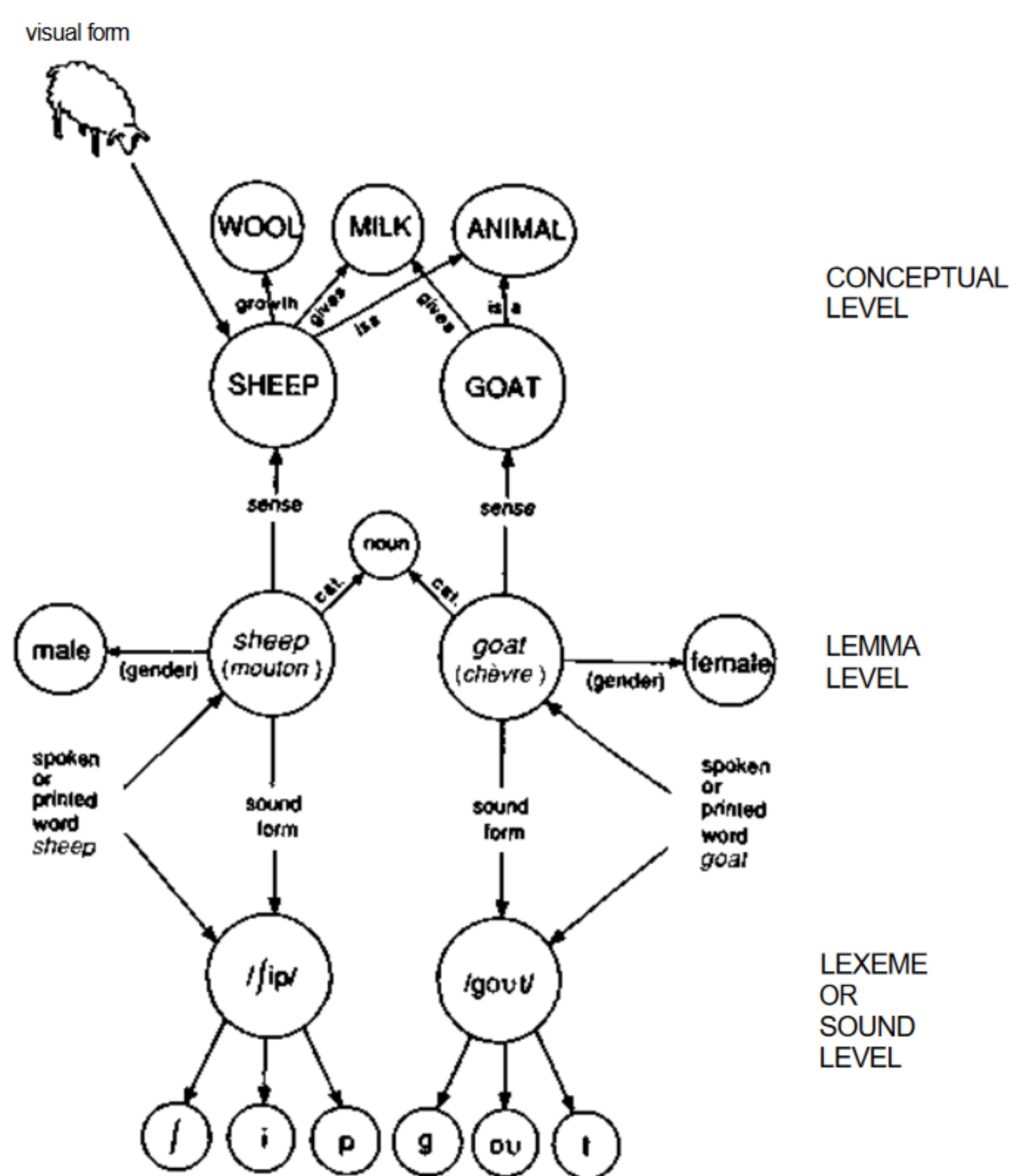
Extensive exposure to written text likely leads to more entrenched (sharpened) lexical representations [2,3].

Previous studies focused on language comprehension, using e.g. lexical decision and visual world prediction tasks.

RESEARCH QUESTIONS

Do large vocabularies also lead to faster lexical access during language production tasks?

Assuming a two-stage model of word production [4,5], which stage(s) are affected by individual differences in vocabulary knowledge?



METHOD



Diverse sample of participants (N = 104) with different educational backgrounds (university, vocational college).

Word production battery



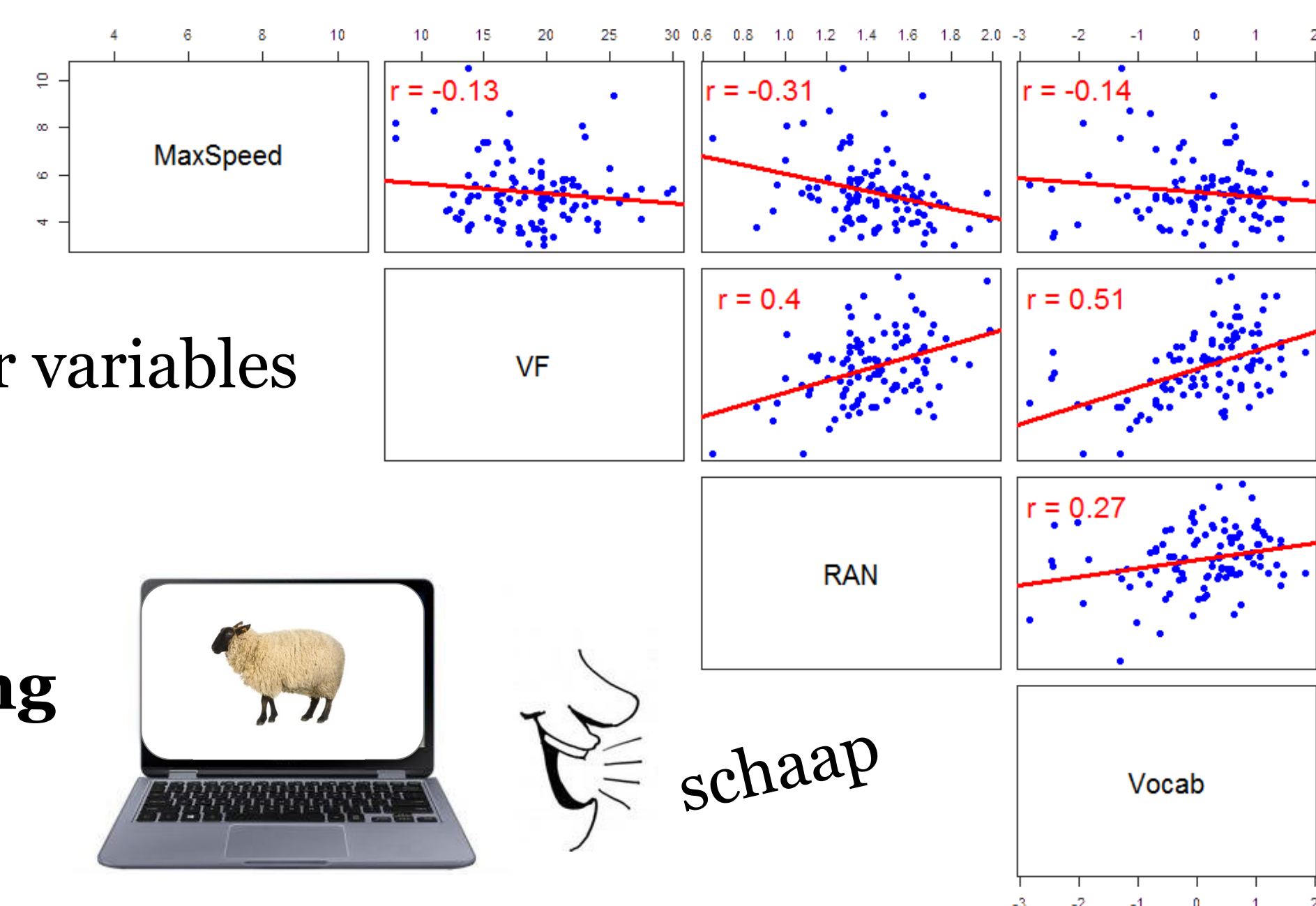
- Picture naming**
- Verbal Fluency:** Animals, Drinks/Food, Letter m, Letter s
- Rapid Automated Naming:** Frequency/Neighborhood density
- Maximum Speech Rate:** Months of the year

+

Peabody Picture Vocabulary Test and **Stairs4words** (self-designed adaptive test for measuring receptive vocabulary size. Common factor 'Vocabulary' derived from both tests (correlation: $r = 0.56$).

RESULTS

Correlations among predictor variables



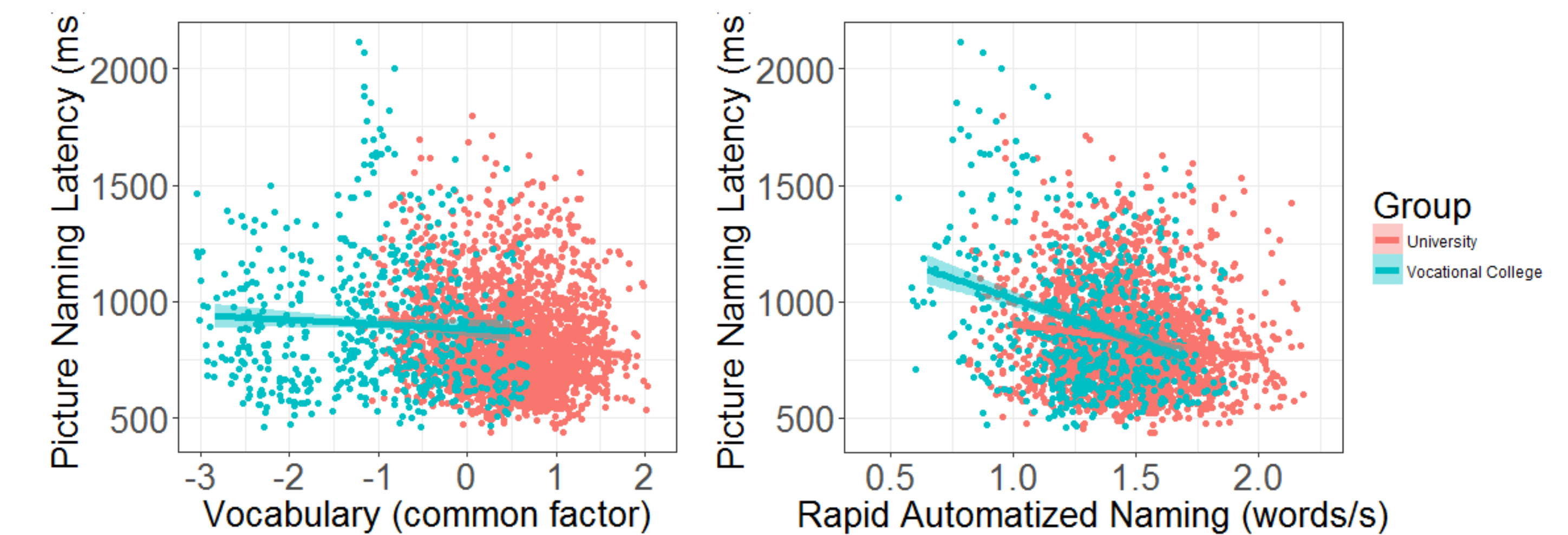
Picture naming

Descriptives

9/40 items removed (low name agreement)
 Mean = 853 ms (SD = 233 ms)
 Min = 435 ms, Max = 2117 ms, Range = 1682 ms

Linear mixed-effects model ~ Picture naming latencies

Vocabulary ($\beta = 12.52$, $t = -2.65$) and **RAN** ($\beta = 12.51$, $t = -3.79$) predicted picture naming latencies.



DISCUSSION

Lexical access was faster in individuals with larger rather than smaller vocabularies [cf. 1,2,3].

Evidence for entrenchment effects in word production, suggesting shared lexicon between modalities.

Independent (non-interacting) contributions of Vocabulary and Rapid Automated Naming to explaining variance in lexical access (i.e., picture naming latencies).

Both skills most likely associated with different stages of word production process: Vocabulary → Access to semantic representations, RAN → Access to phonological forms.

REFERENCES

- [1] Mainz et al. (2017). *Frontiers in Psychology*.
- [2] Brysbaert et al. (2016). *JEP: HPP*.
- [3] Mani & Huettig (2014). *Journal of Experimental Child Psychology*.
- [4] Bock & Levelt (1994). *Handbook of Psycholinguistics*.
- [5] Levelt, Roelofs, & Meyer (1999). *BBS*.

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