The Children and Young People's Books Lexicon (CYP-LEX): A lexical database of books directed at children and young adults

Maria Korochkina[1] | **Marco Marelli**[2] | **Marc Brysbaert**[3] | **Kathy Rastle**[1]

[1]Department of Psychology, Royal Holloway University of London, UK

[2]Department of Psychology, University of Milano-Bicocca, Italy

[3]Department of Experimental Psychology, Ghent University, Belgium

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ROYAL HOLLOWAY UNIVERSITY OF LONDON

The CYP-LEX project

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- The speed with which children gain reading expertise depends on the *nature of language* they are exposed to
- Yet, presently, we know very little about *what* children and young people are reading

Corpus development

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National reading surveys, publisher data, & book sales statistics from Amazon UK, BookTrust, Goodreads, LoveReading4Kids, etc.

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Cleaning, tokenisation, lemmatisation, PoS-tagging...

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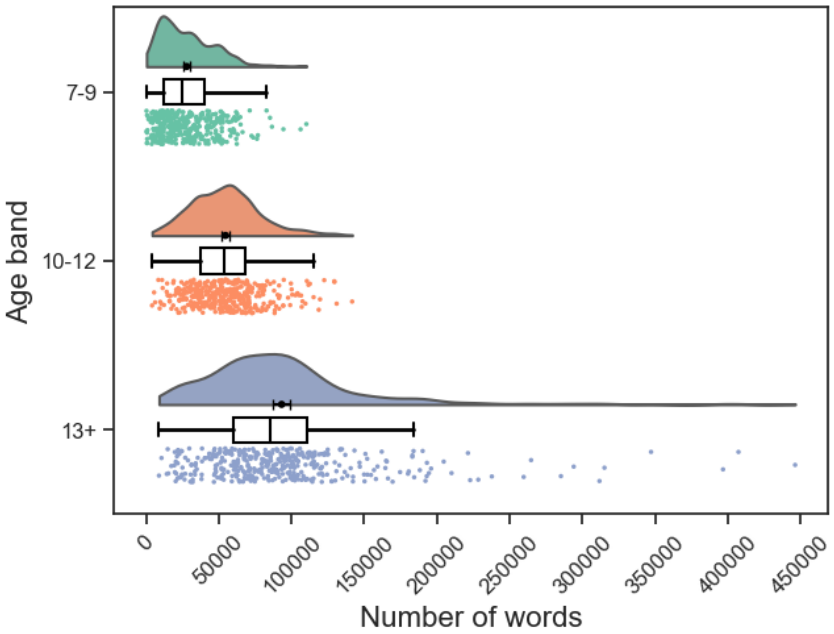

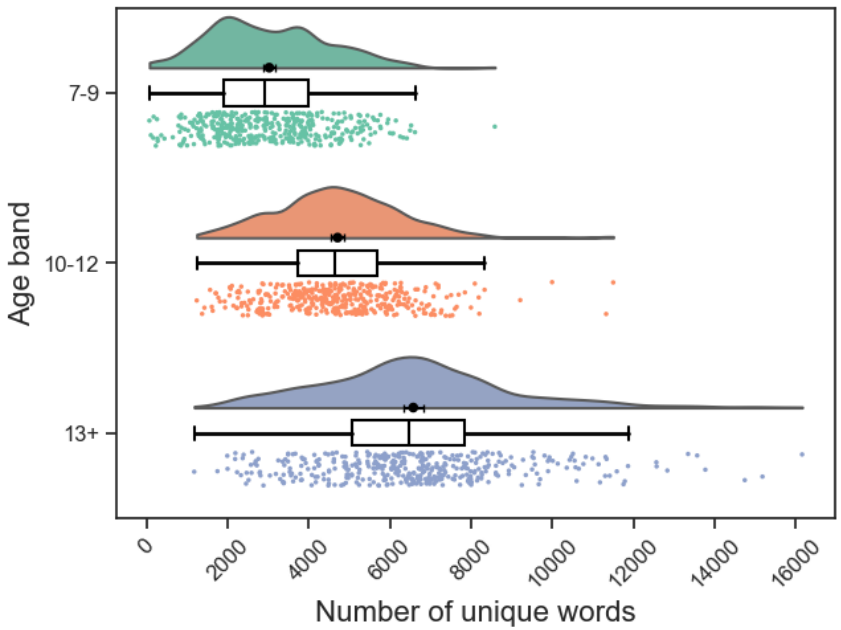

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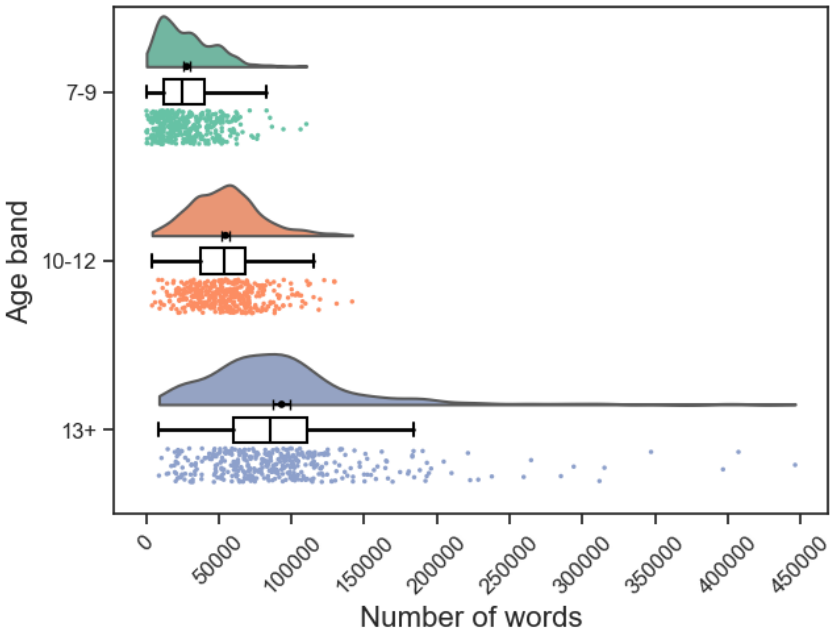
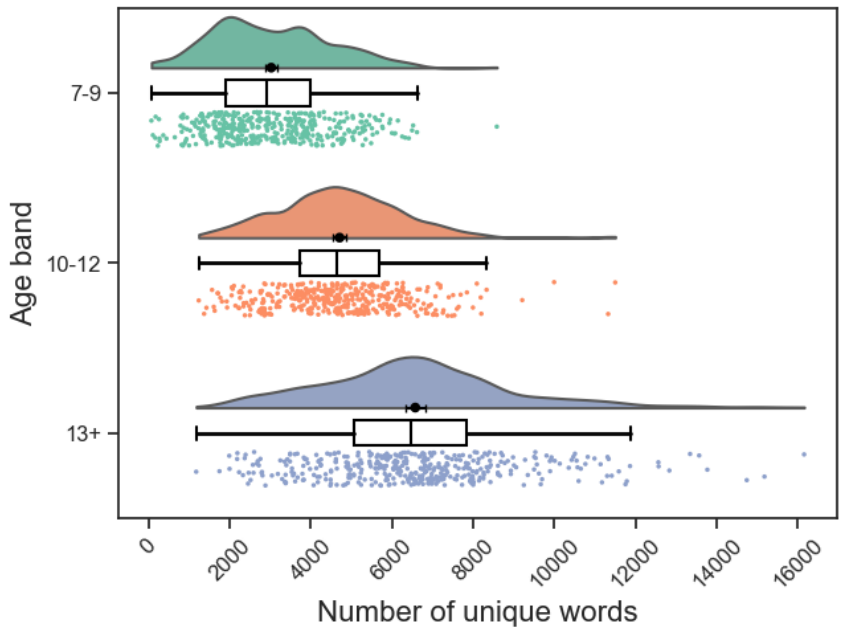
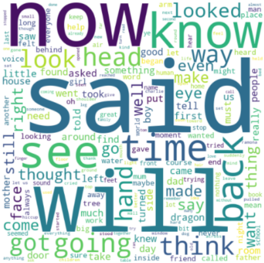




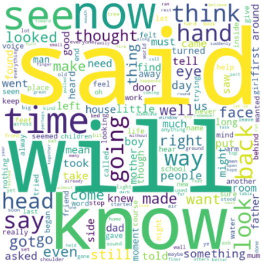
	7–9	10–12	13+
N words	11,162,653	21,837,794	37,286,770
Average N (σ) words per book	27,907 (19,212)	54,594 (24,012)	93,217 (57,718)
N unique words	52,851	70,945	90,980
Average N (σ) unique words per book	3,028 (1,452)	4,713 (1,550)	6,447 (2,366)

Some words occur very widely...

7–9



10–12



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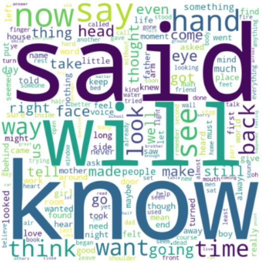

...and amount to half of the corpus

...and amount to half of the corpus

"HA! HA! HA!"

The stern-faced crowd began to chuckle too.

"HO! HO! HO!"

"Well played, boy!"

"The child is a marvel with animals!"

"This pair should be on the stage!"

Feeling ten-foot tall now, Eric was wondering if there was something else he could do? Could these raspberries be blown into something resembling a tune? There was only one way to find out.

The boy didn't know many songs. One he often sang in school assembly and had, in fact, sung that very morning was "Rule, Britannia!".

So, replaying the tune in his head, he began raspberrying out the notes of the chorus.

"PFFFT! PFT! PFT! PFT!"

Eric then fell silent in the hope that Gertrude would follow his lead.

The gorilla tilted her head and looked at the boy as if he was barmy.

Undeterred by this, Eric persisted. The boy repeated himself.

"PFFFT! PFT! PFT! PFT!"

Gertrude tilted her head to the other side. Then a mischievous thought flashed across her eyes, and she pursed her lips together and pushed her tongue forward.

"PFFFFFFFFFFFFFT!"

A long, low raspberry came out, once again covering the boy with gorilla spittle.

"Good luck with that one, lad!" snorted a voice from behind.

"Next you'll be teaching it to play the piano!"

"Or dance for the Royal Ballet!"

"HA! HA! HA!"

Eric could sense people ebbing away, but he was sure it was worth one more try.

"PFFFT! PFT! PFT! PFT!"

This time the most wondrous thing happened. Gertrude joined in!

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...but it's the other, less common, words that make up the stories!

...yet, many of the less common words may be unfamiliar

Percentage of CYP-LEX words that children DO NOT encounter on TV

	Cbeebies *0–6 years* $N = 27{,}236$	CBBC *6–12 years* $N = 58{,}691$	SUBTLEX-UK *adults* $N = 160{,}024$
7–9 age band $N = 52{,}851$	61%	30%	9%
10–12 age band $N = 70{,}945$	70%	42%	14%
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74% encountered $\leq$ 3 times

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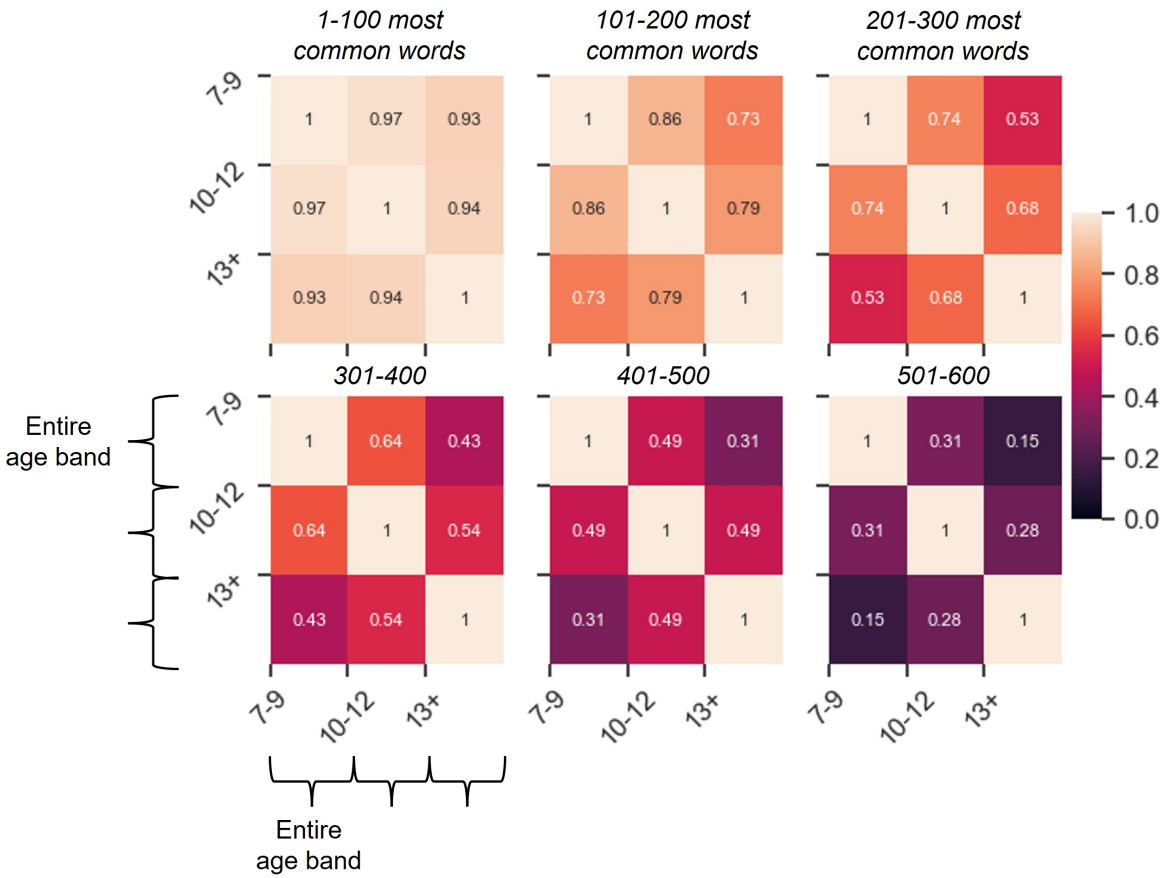

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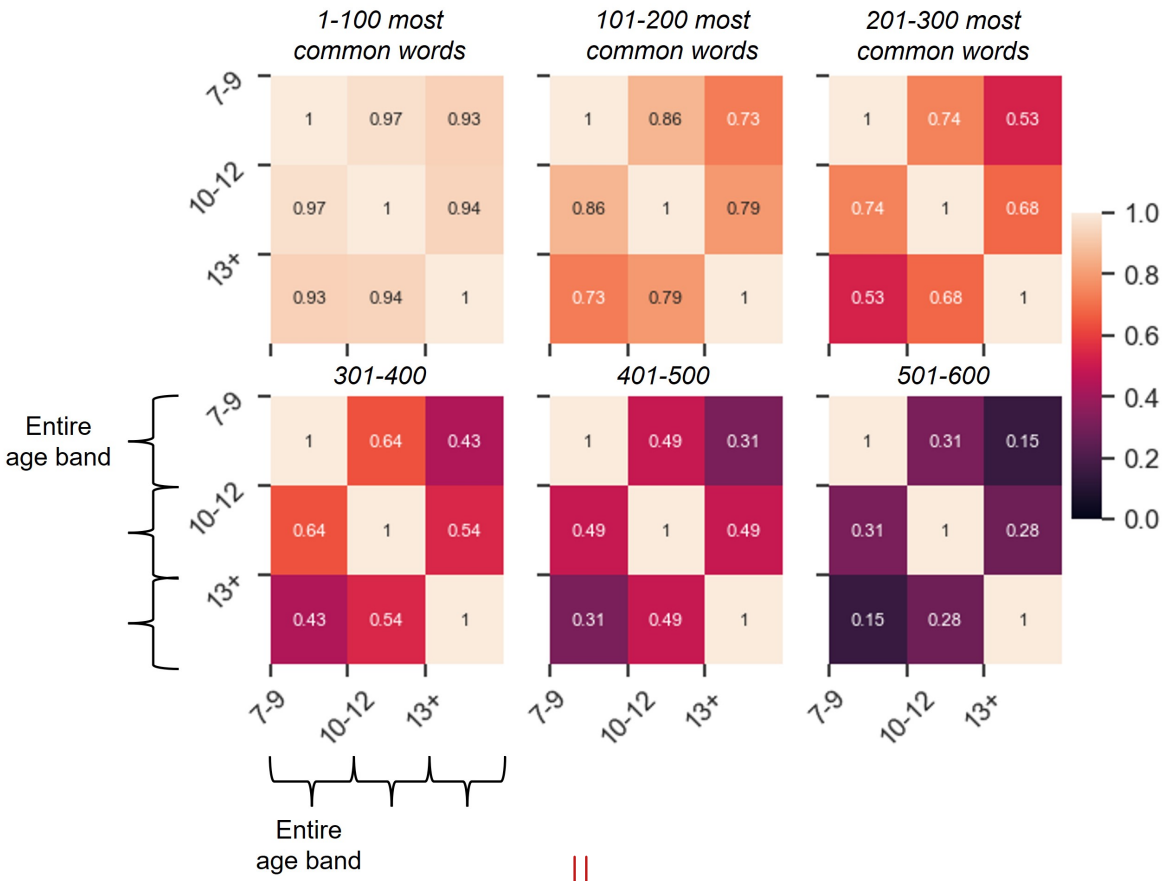

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Similar only in terms of the 200–300 most common words

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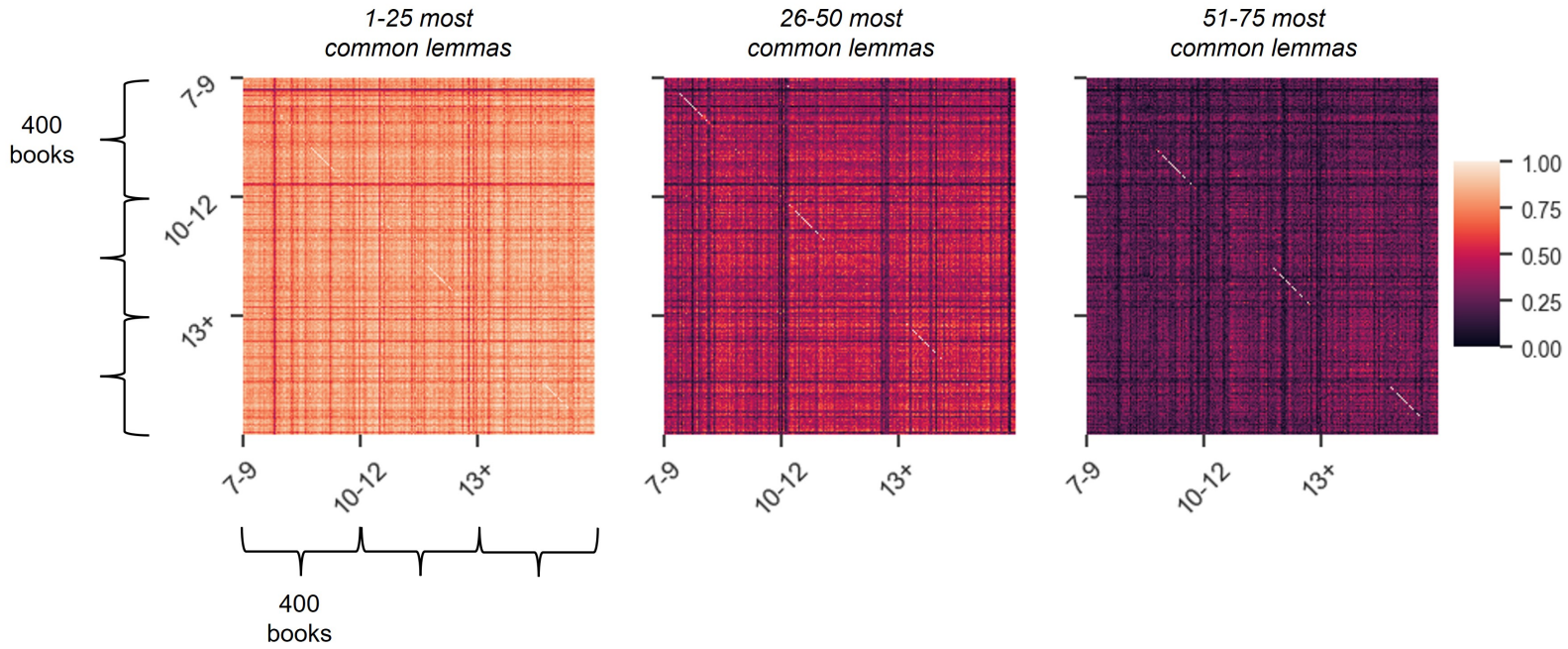

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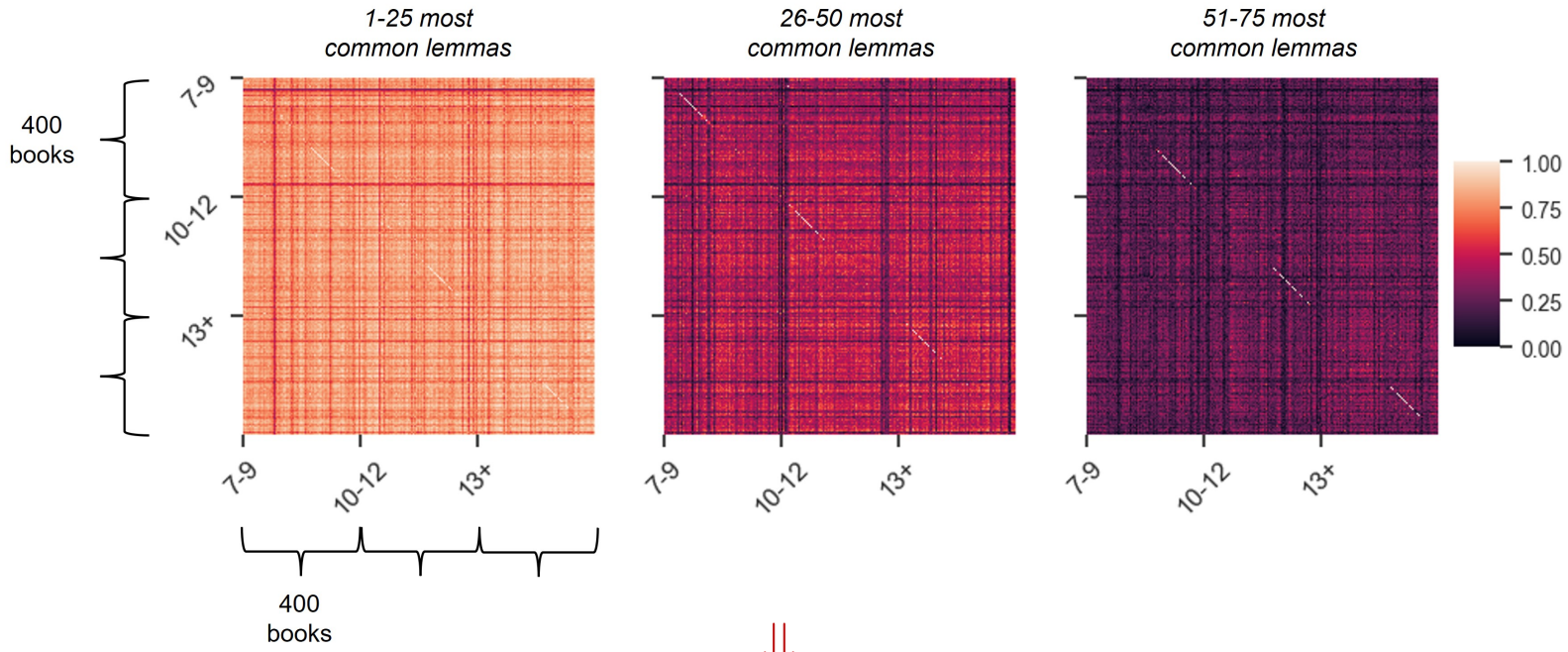

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Similar in terms of their most frequent lemmas but rapidly diverge

Vocabulary *within* the age bands

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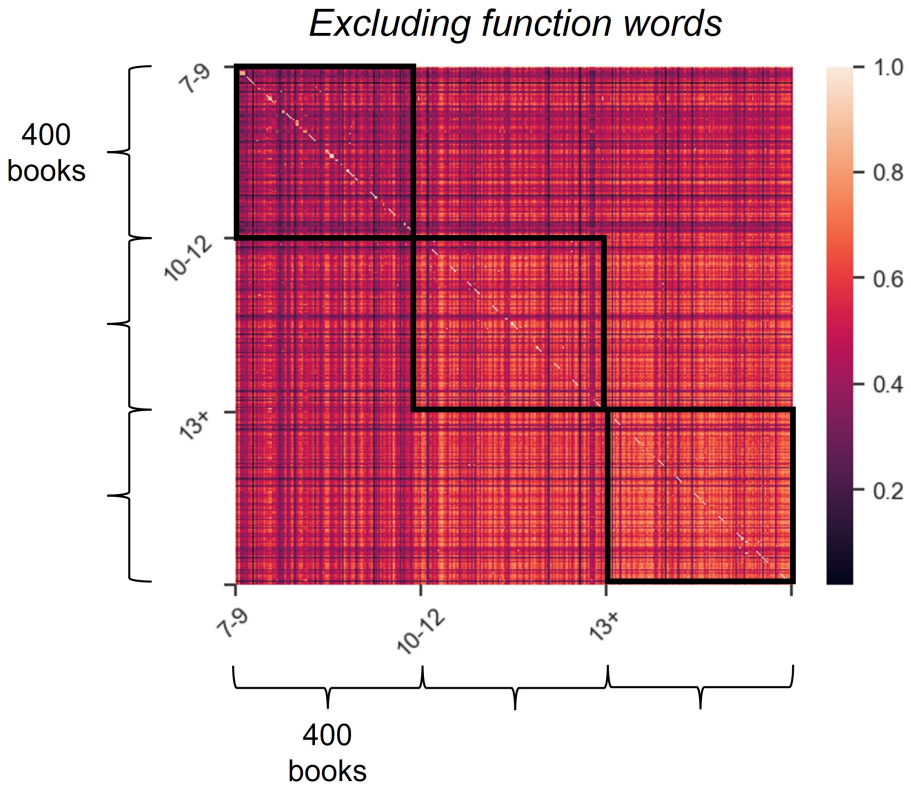

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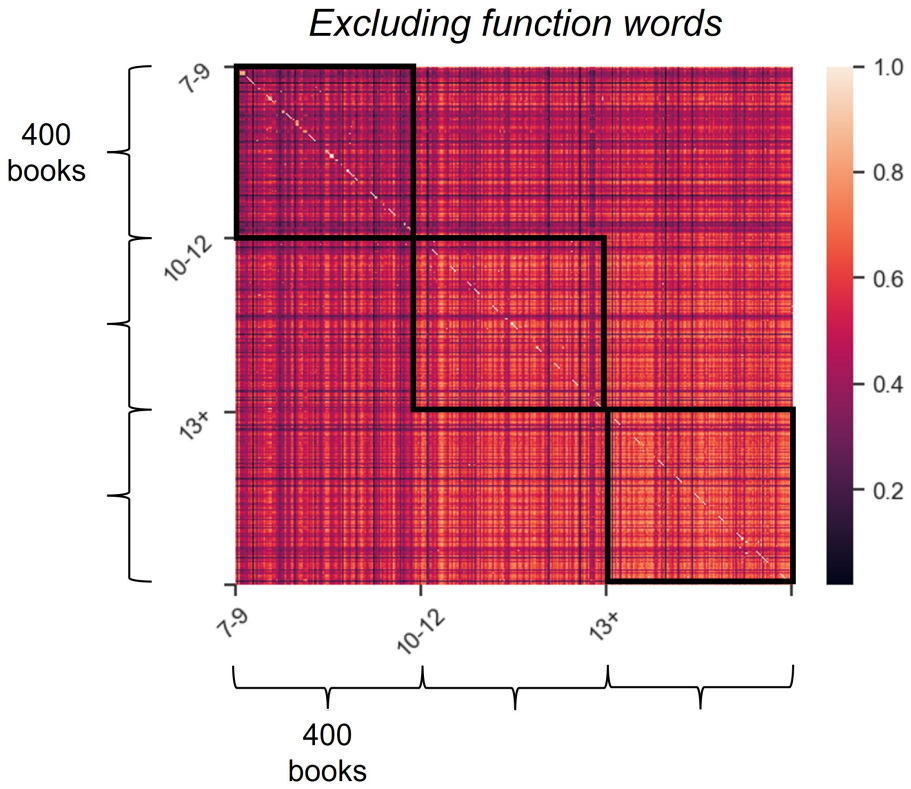

⇓

Books in the 7–9 age band are less similar to one another than those in the other age bands are to one another

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  → It is crucial to develop reading skills & motivation

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  → Importance of tools to decode these words, e.g., morphological knowledge

- Beyond function words, children's books have low similarity to one another

  → Reading widely is key

Thank you!

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