CYP-LEX:
A novel large-scale lexical database of books for children and young people

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How it all started...

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  - 'quick' + '-ify' → 'quickify'

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→ **What** do we need to learn and **how**?

The perks of reading

...or why we need a new corpus

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We need a large-scale publicly available corpus of books that children and young people read!

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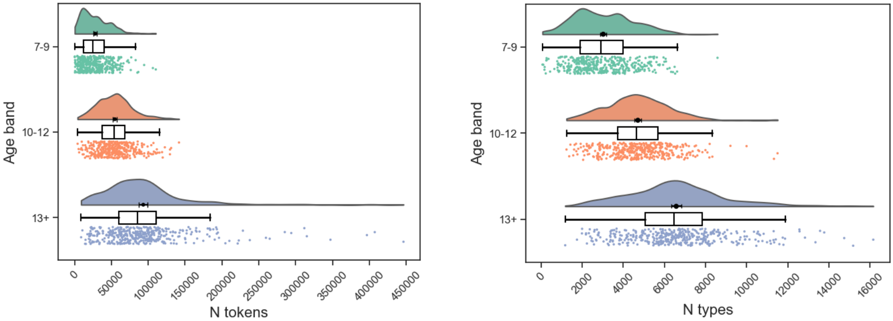
CYP-LEX: Children and Young People's Books Lexicon
70,287,217 tokens & 105,694 types

CYP-LEX size



	CYP-LEX 7–9	**CYP-LEX 10–12**	**CYP-LEX 13+**
N tokens	11,162,653	21,837,794	37,286,770
μ (σ) tokens	27,906.63 (19,212.43)	54,594.48 (24,011.91)	93,216.92 (57,718.38)
N types	52,851	70,945	90,980
μ (σ) types	3,027.81 (1,452.05)	4,712.81 (1,550.43)	6,446.57 (2,365.59)

Corpus validation

CYP-LEX vs. other corpora

	Cbeebies 0–6 years $N = 27{,}236$		**CPWD** 5–9 years $N = 12{,}452$		**CBBC** 6–12 years N = *58,691*		**SUBTLEX-UK** Adults $N = 160{,}024$	
	% shared	r	% shared	r	% shared	r	% shared	r
CYP-LEX 7–9 $N = 52{,}851$	39%	.67	19%	.71	70%	.77	91%	.72
CYP-LEX 10–12 $N = 70{,}945$	30%	.63	14%	.68	58%	.75	86%	.76
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CYP-LEX 10–12 vs. CYP-LEX 7–9

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Raw frequency ≤ 3
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christmastides
osteichthyes
morello
traceries
frazzles
unconsuming
chairmanship
strenth
undervests
deplete
scath
georgians
reclusiveness
darfur
unirrigated
unmysterious
calvaire
polygons
reexamine
cheapened
dunnocks
stalklike
earworms
pinpricking
merth
preternaturally
langleys
islandless
schmuck
littlejohn
ismael
ibsen
liaise
crotched
unreeled
resection
handley
unoriginal
summersets
ramified
enrolls
wroth
catheters
ebbtide
tabla
detent
fairmont
ingres
chaises
warne
knobstick
beguilingly
dustin
libeled
rete
smokable
mortem
kirkyard
kleiber
regicide
dirts
torbay
krug
lightship
biomass
benefaction
emboldening
avocations
englishness
zebrawood
transcaucasian
quia
inrushing
garble
choriambuses
runch
charily
detouring
laughers
signa
donas
flowerets
inkpots
goneness
mesopotamians
rethreaded
reappraised
sapwood
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coexisting
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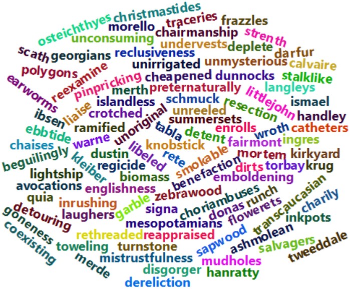

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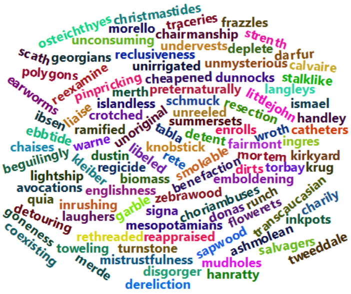

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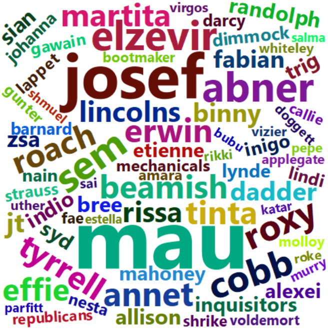

CYP-LEX 13+ vs. CYP-LEX 10–12

31,025 unshared words

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74% ($N = 22{,}855$) of unshared words

cubiculo
hemophilic
infanticides
privatisation
outshooting
lezzies
wisewoman
valborg
pontificating
dempster
cankerworm
remolded
teethlike
outhomers
eliding
bratlings
squabs
wornout
appreciatory
crappier
rhapsodical
empathizing
prebought
gathings
glassies
sultrier
depositories
myocarditis
gutturals
emceed
supplely
habitua
degradations
selenic
unhoned
vising
olid
porringer
innit
panniered
feebs
tarlton
putain
skimping
swahilis
mcphail
ephesus
caimans
sphygmic
ucr
liason
dfa
snoozled
semblable
musts
parzival
widener
olomouc
pollack
hassett
floodwall
shirred
josue
magnetical
overfond
libellers
reactant
vassalage
earlyish
simbirsk
dominica
denay
unprizable
ramification
homozygous
tipplersstudier
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cbd
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fibreboard
lexicographers
misstatement
mendota
gali
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graticules
sexagenarians
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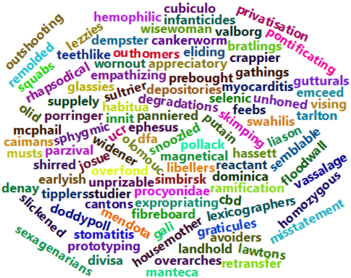

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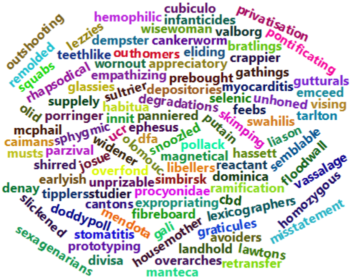

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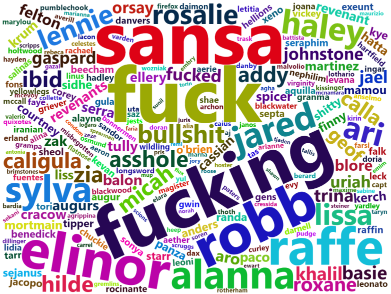

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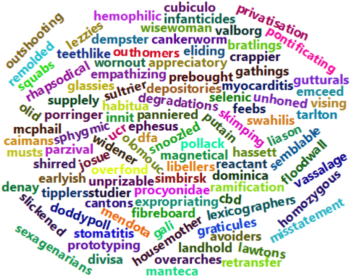

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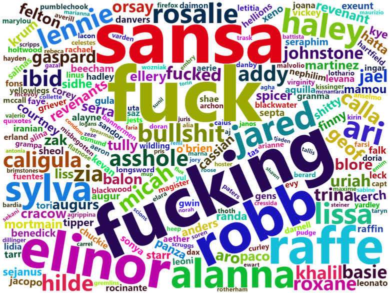

On that note...

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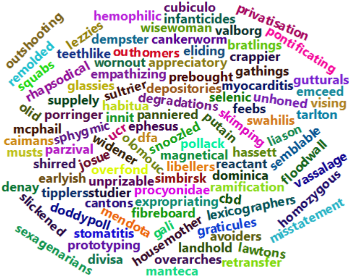

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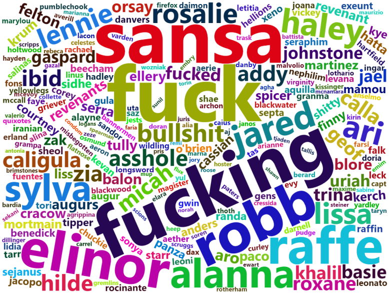

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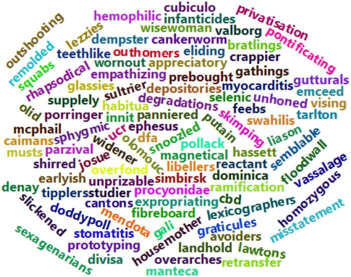

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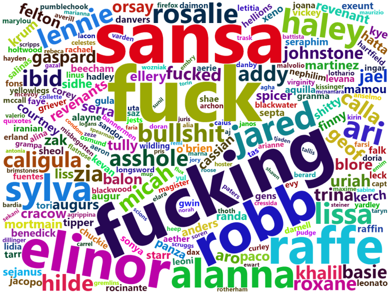

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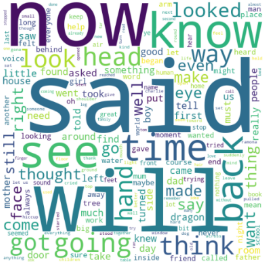
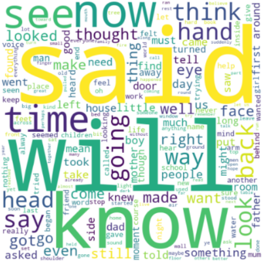
- CYP-LEX 13+ vs. CBBC: ‘shit’ (*Zipf* $= 4.92$, $N = 3{,}077$)
- CYP-LEX 13+ vs. CPWD: ‘hell’ (*Zipf* $= 5.21$, $N = 6{,}103$)

Wait a minute... aren't they identical?

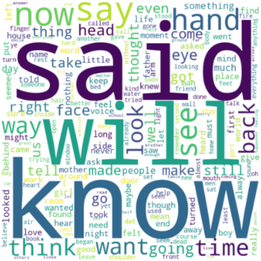
7–9



10–12

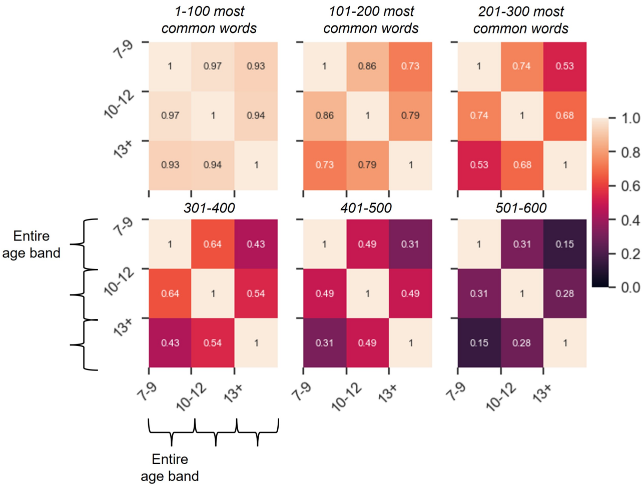


13+



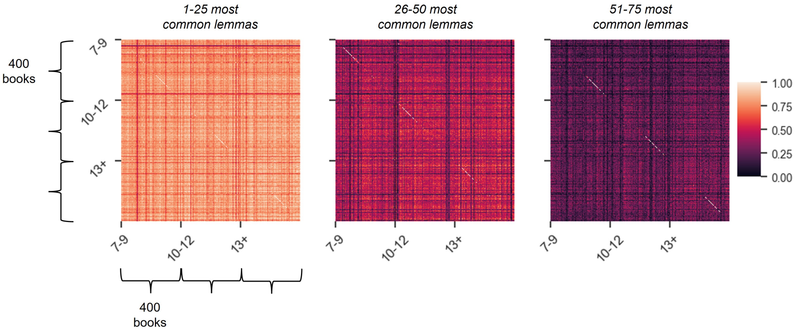
Semantic similarity across the age bands

600 most common words in sets of 100



Semantic similarity across the books

75 most common *lemmas* in sets of 25



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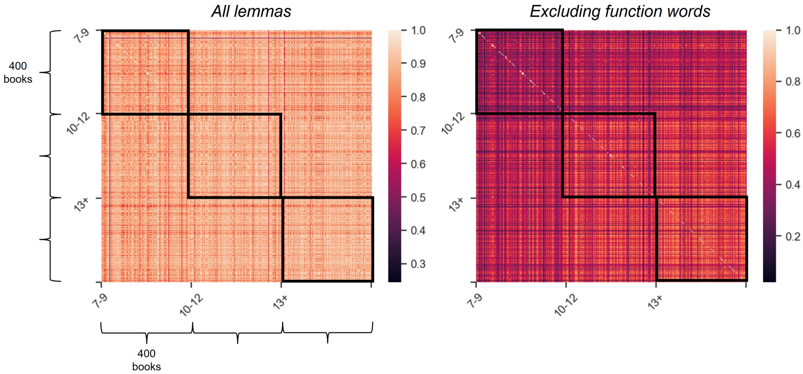

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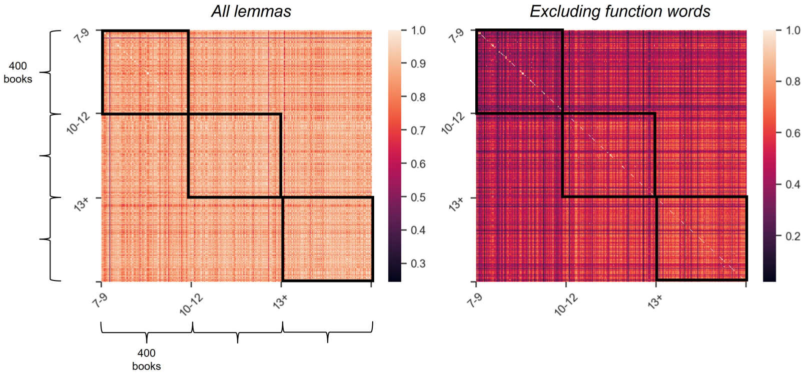

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The ‘older’ the children, the more similar the books?..

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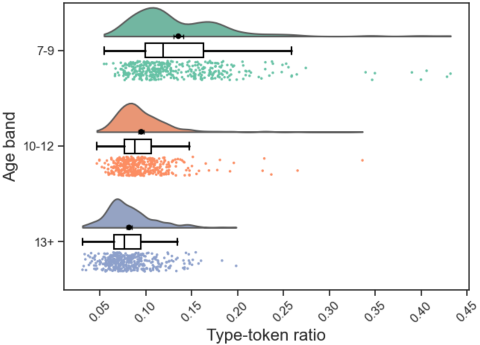

Semantic similarity within the age bands

Type-token ratio

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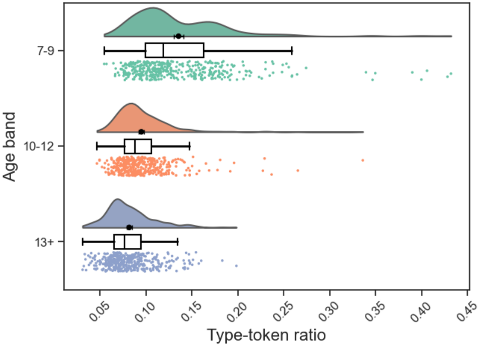
- In CYP-LEX, this relationship is inverse!



Why reading widely is key

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- 100 most frequent vs. infrequent lemmas across all the books in the 7–9 age band

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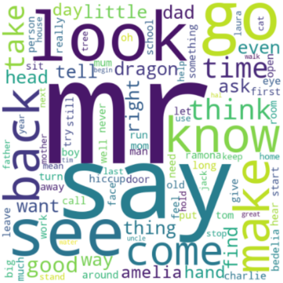
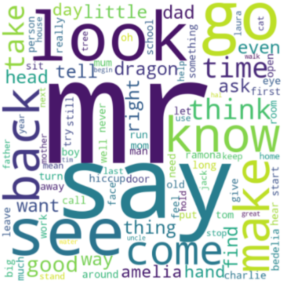


Why reading widely is key

...and why it can be so hard

- 100 most frequent vs. infrequent lemmas across all the books in the 7–9 age band

Most of these occur in all books



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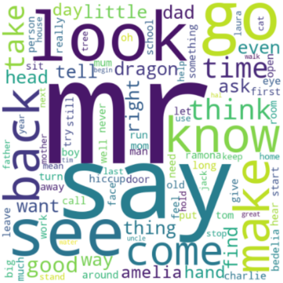

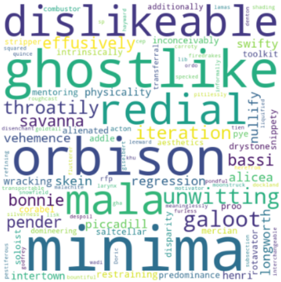

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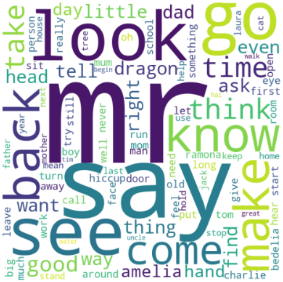
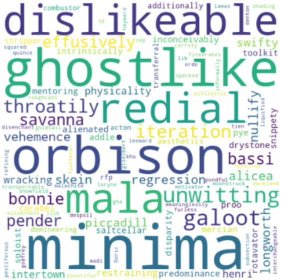


These ones occur in 3 books only



Thank you!

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