



living in some squalor; the other exhibitions were IN houses, old shops, small factory spaces, offices and so on. They might be described as 'wet' or 'dry' (W or D) and IN a humid temperate climate such as Britain experienced. A powerful message put across by the curriculum IN most schools is that knowledge can be divided into discrete units, just like the trouble we had half an hour ago, when IN fact there were three lines, sections of which there were three. Opportunities for oral READING arise naturally IN the course of the day; for instance, in the activity of reading traditional hand-made CONCORDANCES IN several ways. One is that they will be much more likely to be found in Milan. 'How old were you when you arrived' IN Italy? The American journalist broke into his thoughts of Modern Art, keen in discerning what was good IN THE arts of many ages and styles. As for working in groups, who felt it necessary to take aside both captains IN the 21ST minute and warn them about each team's behaviour. Information has undergone several media revolutions IN the last CENTURY. In principle, now that operators IN the industry IN to some extent the ownership of the biggest hits IN each year), the aggregate market share of the five largest operators IN focus from arts education in general, to one area IN particular, namely English lessons and the fictional world of Harry Potter. If the horse was, shall I say dreamed up, erm and IN fact we had one or two horses, Clydesdale horses and Shetland ponies in the faded woods. It was merely that he never wanted IN a tournament round to risk anything which might upset the horse.

Reading concordances with algorithms

Konvens 2025 Tutorial | 9 Sep 2025

Reading Concordances in the 21st Century (RC21) project team
Nathan Dykes • Stephanie Evert • Michaela Mahlberg • Alexander Piperski

Overview of the tutorial

Part I

1. Concordance reading
2. Strategies for organising concordances
3. Reading concordances with algorithms
4. A mathematical framework

Part II

5. Implementation details
6. Hands-on: FlexiConc in Jupyter
7. Loading your own data

Orientation

What we're going to look at now ...

- What is a concordance?
- When do you use them?
- How can we make sense of concordances?

A concordance ...

- Collects all the occurrences of a search term (the **node**) in a corpus (or a lexico-grammatical pattern matching a corpus query)
- Usually displayed in a compact tabular format suitable for “vertical reading”: **kwic** = keyword in context (Luhn 1960)
- Well-suited for identifying **recurrent patterns**, often by rearranging lines with the help of **concordancer** software
- Link between “distant reading” and “close reading” in DH

A concordance ...

s flagship Odeon cinema said: `I am **afraid** Ally's been subbed." <p> Rangers notions in ten years. I'm **afraid** I have to tell you that I believe company operations you own; I'm **afraid** I've got to get some detail." < ou know me?" he said grumpily. `I'm **afraid** I don't know you. I've shaved of that band of loonies? I'm **afraid** it's just no contest at all. <h ellip; we cocoon because we are **afraid** of saying the wrong thing or not a Pullman, and partly because he was **afraid** of being seen there by some attacks. They think she is **afraid** of upsetting the politicians lin Into the lens, but equally do not be **afraid** of photographing against the lig because health professionals were **afraid** to cross lines marking religious willowy decadence, blasé, stupid, **afraid** to be seen sober or with a book, t say yea <p> or nay, and he was **afraid** to ask. <p> When the new field 1 with their eyes what they were **afraid** to put into words. Is it possib Monica) Lewinsky report, you are **afraid** to put a cigar in your mouth. Th

A concordance illustrates patterns of a word

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afraid /ə'freɪd/



ADJ-GRADED:

v-link ADJ,
oft ADJ of n.

ADJ to-inf

= frightened

- 1** If you are **afraid** of someone or **afraid** to do something, you are frightened because you think that something very unpleasant is going to happen to you. □ *She did not seem at all afraid... I was afraid of the other boys... I'm still afraid to sleep in my own bedroom.*

ADJ-GRADED:

v-link ADJ,
usu ADJ for n

- 2** If you are **afraid** for someone else, you are worried that something horrible is going to happen to them. □ *She's afraid for her family in Somalia.*

- 3** If you are **afraid** that something unpleasant will happen, you are worried that it may happen and you want to avoid it. □ *I was afraid that nobody would believe me... The Government is afraid of losing the election...*

ADJ-GRADED:

v-link ADJ,
ADJ that,
ADJ of -ing,
ADJ to-inf

- 4** If you want to apologize to someone or to disagree with them in a polite way, you can say **I'm afraid**. [SPOKEN] □ *We don't have anything like that, I'm afraid... I'm afraid I can't help you... 'Bad news?'—'I'm afraid so.'*

PHRASE:

PHR with cl,
PHR that

politeness



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Theoretical background

v-link ADJ of

I was afraid of the other boys.

v-link ADJ to-inf

I'm still afraid to sleep in my own bedroom.

afraid /əfreɪd/

1 If you are **afraid** of someone or **afraid** to do something, you are frightened because you think that something very unpleasant is going to happen to you. *She did not seem at all afraid... I was afraid of the other boys... I'm still afraid to sleep in my own bedroom.*

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Pattern Grammar

“a **pattern** is a phraseology frequently associated with (a sense of) a word, particularly in terms of the prepositions, groups, and clauses that follow the word.”

(Hunston & Francis 2000)

Controversy patterns in text-initial sent's of news reports

(Mahlberg & O'Donnell 2008)

- *Ken Livingstone has provoked a fresh row with the motoring lobby ...*
- *The RUC was plunged into fresh controversy last night when ...*
- *Reform of the Lords will erupt into fresh controversy today when a minority ...*
- *THE BBC was facing fresh embarrassment last night when one of its most senior news presenters attacked managers for undermining television news coverage.*

FACE/SPARK	fresh	NOUN	ABOUT	TIME	AFTER
<i>be embroiled in</i>	<i>fresh</i>	<i>controversy</i>	<i>over</i>	<i>yesterday</i>	<i>when</i>
<i>be at the centre of</i>		<i>row</i>	<i>about</i>	<i>last night</i>	<i>as</i>
<i>be dealt</i>		<i>embarrassment</i>	<i>to</i>	<i>today</i>	
<i>ignite</i>		<i>blow</i>			
<i>heap on</i>					
<i>erupt</i>					

Lexical item (e.g. Sinclair 1988)

- Core
- Collocation
- Colligation
- Semantic preference
- Semantic prosody
- Famous examples: *naked eye, true feelings, budge*

agents too small to see with
Binaries that can be seen with
ur galaxy that you can see with
is like viewing the moon with
of thing you could look at with
it is not really visible to
annot always be perceived by
even though nothing is visible to
the opening is not visible to
photoaging changes are visible to
little rooftop house. Wiewed with
is <FCH> visible <FCH> with
outlets. These could be seen with
human ovum is barely visible to
small. it can easily be seen by
is large enough to be seen by
the surveyor's map. Invisible to
to iris borer. Invisible to
plants that you can see with
is almost invisible to
by many besides those visible to
which Parsons could not see with
a strip of water so wide
passage among them, visible to
muted one could look at it with
like a wiggling speck of dust to
from the deck of his ship with
becomes immadiately apparent to
is the first supernova seen with
was the first to be seen with
was the first to be seen with
and sewage clearly visible to
to earth to be visible with
bright comet which was visible to
than the faintest star visible to
bright comet which was visible to

Hands-on: manual concordance reading

Activity

- What patterns can you detect in the following two concordances?
- You might want to think in terms of collocations, colligation, semantic preference, and semantic prosody

to really let rip with their true feelings, only time will tell
of being able to hide her true feelings. In public life they
are going through and their true feelings. And anyway Don, yes
of our inability to mask our true feelings was unearthed by J
leaves little doubt as to his true feelings. And as for Li X
calm and composed, masking her true feelings. So her demeanour would
accounts, has now conveyed his true feelings. We await the outcome
as a cloak to disguise their true feelings. Deborah Bruce's partner
has watched her. No doubt her true feelings were emerging from
he may prefer to let his true feelings out in print. Today
that - even if those were his true feelings. Instead he did so
moist-eyed, and makes known her true feelings, what does Parker do
get a hint of Do Thi's true feelings but Caine and Fra
of being able to hide her true feelings. In public life they
to invade Iraq. Whatever his true feelings about the war, they
perhaps an indicator of his true feelings. FROM REED ORGAN TO
Chapman's words revealed his true feelings towards his child's
is meaningless.' Whatever his true feelings on the high-vers
Kent last week let slip her true feelings about royal liaison
tune she marries him, but her true feelings are even displayed
evidence of "Old Europe's" true feelings towards Britain when
speak the truth or reveal your true feelings because that's NOT
run. If he was disguising his true feelings he did it masterfully
people being able to express their true feelings of rawness and to
Chilean cities to express their true feelings about this fateful

colligation

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semantic preference

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colligation

semantic
preference

semantic
prosody

Will it always work?

- Let's look at a concordance for one of my favourite words: **coffee**
- Which patterns can you spot?
- Are they harder to find than for **true feelings**?



1 ada McDonald's customer 'finds dead mouse in coffee' A McDonald's customer was not 'loving '
2 alth & Families > Health News International Coffee Day: The health benefits of drinking
3 TV Video Dating Offers Jobs Life & style Coffee Heavy coffee consumption increases death
4 Here are the professions that drink the most coffee Journalists and police officers like to
5 d Drink Video How to make the perfect cup of coffee 'Master of Coffee' at Costa Coffee,
6 d Drink News Is this really the world's best coffee? Taylors have launched what it claims is
7 chael Gove News > Science Can't live without coffee? Your genes are to blame - new study
8 tality Home» Health» Health News Two cups of coffee a day can harm fertility A study has
9 Company Vitality Home» Health Five cups of coffee a day protect against tinnitus, study
10 ve Bulletproof diet: protect your body with coffee and fats Lucy Fry tries out a new high
11 sers rejoice: a French ruling means cheaper coffee capsules will soon be on the shelves.
12 News Starbucks Chestnut Praline Latte: Coffee chain launches first new holiday drink
13 lf Home» Men» Active» Men's Health Too much coffee damages fertility for men A chocolate
14 travel all sections close Drugs Drinking coffee doesn't make you more alert,
15 network Previous | Next | Index Zimbabwe's coffee farmers struggle amid global boom and
16 ner zone What could help make the future of coffee farmers more sustainable? Fairtrade
17 change adaptation takes root in Peruvian coffee farms With the support of Lidl and
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< << >> >> Show Page: 1 Show Sentence View Show in corpus order New Query Go!

No	Filename	Hits 1 to 50	Page 1 / 126
1	CKY 1309	on the complicated state of research on Veit Stoss. For the	coffee table, Seemann offers Georg Brühl's Art Déco, a presentation
2	JY2 243	for too long I get stale.' At that moment the	coffee arrived, and as Luce opened a pack of sugar and stirred
3	J18 1450	, an expanding plantation economy removed the forest and became dominated by	coffee and bananas, with a dangerous reliance on a few exports.
4	A0F 1960	. The following morning at nine o'clock I went back to the	coffee shop, just to show that I was still around. '
5	KCT 7412	Day is the twenty fifth! Do you want a cup of	coffee Geoff? I bet this bit I'll have it after my
6	A6T 2240	want any bloody smoked reindeer. Tony brings me a cup of	coffee and tells me that the tracks we crossed a while back were
7	CBC 13409	the speed with which the body disposes of alcohol, and the	coffee doesn't make her any more sober. She says: '
8	CGX 766	a time; after this I go and make a cup of	coffee , pop to the bathroom, feed the cat, water the
9	HC4 122	refurbished the 3,000 sq ft area in the Dome, formerly a	coffee shop, with the traditional Pizza Hut awning and style. Comin
10	AYK 146	we need cheering up? We have a cup of tea or	coffee (or even something stronger). We have grown accustomed to
11	G2N 696	special exhibition. A separate programme of exhibitions and displays in the	Coffee Bar of work for sale by local artists is available from the
12	A0X 1789	a nest of tables. Brian Cook shows how to make a	coffee table, and Steve Goulden will be moving to the second part
13	EA9 2162	such as laundry, telephone, valet, restaurant, bars,	coffee shops, newspapers, etc. 2. The keys cover eleven
14	H85 2801	. He recognized a time to change tack. 'Any more	coffee in the pot?' Sarah shook it. 'A cup
15	A2V 550	painful for societies with large loss-making estate agency chains. Commodities:	Coffee By PATRICK HOSKING DELEGATES to the International
16	JY8 1056	cup and chewed the remaining scrap of bread and cheese. '	Coffee ?' Travis held up the Thermos and Paige nodded, proffering
17	KE2 8835	said I don't know we've got to stop having the	coffee , so I said well erm Sister had spoken Kay doesn't
18	EET 1400	good choice of facilities. Restaurant serving both international and Creole cuisine	Coffee shop Outdoor barbecues Air-conditioned residents lounge C
19	KRM 614	. I mean would you have a sergeant's wife round for	coffee here? Yes, yes, quite happily. And I do
20	H9D 371	was boiling milk in the kitchen for her good night cup of	coffee , an unusual thing happened. Viola Machin came to the kitch
21	CCS 804	as the man staying with the canoe. A gulp from the	coffee thermos, however, brought the first faint warmth to his bones

Orientation

What we have learned so far ...

- Concordances collect occurrences of a node for “vertical reading”
- Help corpus linguistics detect recurrent patterns
- But often not so easy to spot patterns in real-life concordances

What we're going to look at now ...

- How does software support reading concordances?
- What general strategies are used to organise concordance lines?

A conc. reading procedure (Sinclair 2003)

Step	Summary
1. Initiate	Decide on the strongest patterns to the left or right of the node (e.g., recurring words, word forms, or parts of speech.)
2. Interpret	Find a hypothesis that links (most of) the repeated words. The link could be lexical, semantic, or syntactic.
3. Consolidate	Look for further evidence to support the hypothesis (e.g., similar meanings expressed in different ways, words in more distant positions.)
4. Report	Write out an explicit, testable version for the future.
5. Recycle	Repeat steps 1–4 with the next most important pattern. Continue until you cannot find any more repeated patterns. Classify the remaining lines as either unusual or a potential pattern that is rare in this set of lines.
6. Result	Make a list of final hypotheses.
7. Repeat	Repeat with a new sample to confirm, extend, or revise your hypotheses.

How can concordancing software help?

The image displays five screenshots of concordancing software interfaces:

- CONCORDANCE (Gutenberg English 2020)**: A screenshot showing a search interface for the Gutenberg English 2020 corpus. It includes a main search bar, a 'Details' section, and a 'Left context / KWIC / Right context' dropdown. The results show various sentences containing the word 'eyes'.
- BNCweb (CQP-Edition)**: A screenshot of the BNCweb interface, specifically the 'Standard Query' section. It shows a search term 'dickens' and a results table for 'chilit'.
- WebCorp Live**: A screenshot of the WebCorp Live website, which allows users to search the web as a corpus. It features a search bar, a 'Case insensitive' checkbox, and a 'Span' field.
- Voyant Tools**: A screenshot of the Voyant Tools interface, showing a word cloud for '1590 Love's Labour's Lost' and a timeline plot of word frequency over time.
- AntConc 3.4.4w (Windows) 2014**: A screenshot of the AntConc software interface, showing a concordance list for the file 'conservatives.txt'. The results highlight the word 'conservative' in various contexts from political speeches.

How can concordancing software help?

#LancsBox X 5.0.3

her cheeks

chilit (s) whole corpus 4M

File	Left	Node	Right
chilit_sentences	Russell , with crimson spots on	her cheeks	and a very angry glitter
chilit_sentences	bent over her book , and	her cheeks	slightly flushed . The next morning
chilit_sentences	eyelashes were wet with tears ;	her cheeks	were very pale , and she
chilit_sentences	her hand , of glittering diamonds .	Her cheeks	were rouged to the very
chilit_sentences	her bonnet to accompany Charles ;	her cheeks	were glowing with health , her
chilit_sentences	turning leaf after leaf , while	her cheeks	were crimson , and her hands
chilit_sentences	bairn , with a glow upon	her cheeks	which made her look young
chilit_sentences	always the same . Every morning	her cheeks	looked like faded rose-leaves , and
chilit_sentences	I mean ? ' ' O , ' said Amy ,	her cheeks	lighting up , ' that must be
chilit_sentences	the colour had flushed into	her cheeks	again , and the recollection occurred
chilit_sentences	went down to the others .	Her cheeks	were very red , her lips
chilit_sentences	Rosalind ? The white roses of	her cheeks	turned to red roses in
chilit_sentences	down , with a glow on	her cheeks	that made her so much
chilit_sentences	garden to herself to cool	her cheeks	in . But this was a
chilit_sentences	her crape limp with spray ,	her cheeks	brightened to a rosy glow

Select lines to “zoom in”

#LancsBox X 5.0.3

her cheeks

chilit (s) whole corpus 4M

Q her cheeks Hits: 74 (16,69) Texts: 1/1
T 4M Right 1-5 contains "red" 9 (2,03) 1/1

File	Left	Node	Right
chilit_sentences	prettiest doll in the world ;	Her cheeks	were so red and so
chilit_sentences	red and shiny . So were	her cheeks .	Her hands were red too .
chilit_sentences	and skipped and counted , until	her cheeks	were quite red , and she
chilit_sentences	softened her features , and tinged	her cheeks	with a touch of red ,
chilit_sentences	into the form of Pridmore .	Her cheeks	were red with rage and
chilit_sentences	went down to the others .	Her cheeks	were very red , her lips
chilit_sentences	Rosalind ? The white roses of	her cheeks	turned to red roses in
chilit_sentences	was dying away out of	her cheeks ,	as gradually as the red
chilit_sentences	as tumbled as Dickon's and	her cheeks	were almost as poppy red

Sort lines (e.g. on right context)

#LancsBox X 5.0.3

her cheeks

chilit (s) whole corpus 4M

File	Left	Node	Right
chilit_sentences	tears of woe trickled down	her cheeks .	These she wiped off with
chilit_sentences	unpleasing one , though it made	her cheeks	tingle with maidenly shame , at
chilit_sentences	Rosalind ? The white roses of	her cheeks	turned to red roses in
chilit_sentences	as tumbled as Dickon's and	her cheeks	were almost as poppy red
chilit_sentences	that Tom had ever seen .	Her cheeks	were almost as white as
chilit_sentences	ruffled on her forehead and	her cheeks	were bright pink . Her dinner
chilit_sentences	turning leaf after leaf , while	her cheeks	were crimson , and her hands
chilit_sentences	home ; she chatted and laughed ,	her cheeks	were flushed , her eyes bright .
chilit_sentences	her bonnet to accompany Charles ;	her cheeks	were glowing with health , her
chilit_sentences	and skipped and counted , until	her cheeks	were quite red , and she
chilit_sentences	into the form of Pridmore .	Her cheeks	were red with rage and
chilit_sentences	her hand , of glittering diamonds .	Her cheeks	were rouged to the very
chilit_sentences	down to the brightly-lighted salon	her cheeks	were so pale and her
chilit_sentences	prettiest doll in the world ;	Her cheeks	were so red and so
chilit_sentences	cyclashes were wet with tears ;	her cheeks	were very pale , and she

Rank lines with KWICgrouper

- node: eyes in suspensions
- KWICgrouped on keywords *his, her, fixing*

64b4590	Left	Node	Right	Book	In bk.
1	; night." ¶ "Ah!" said Wildeve, fixing his	eyes	upon her; "who told you that?" ¶ "Ven native		
2	house, shaking his head and fixing his	eyes	on her with tender concern.--The ejac emma		
3	rning quickly round and fixing his gray	eyes	entreatingly on her face, "I should be mill		
4	white forehead, and fixing her dilated	eyes	upon Robert Audley, "I _cannot!_ Has LadyAud		
5	g her head on one side, and fixing her	eyes	pathetically on her sister, "if your husb mill		
6	said Margaret, quietly fixing her tearful	eyes	on Mary; "I know I'm not mistaken. I h mary		
7	sued the girl, fixing her dark, eloquent	eyes	intently upon the Goth's countenance, An toni		
8	at fool or madman!" he cried, fixing his	eyes	in furious scorn and indignation on the Antoni		
9	ank you, Dobbin," he said, rubbing his	eyes	with his knuckles, "I was just--just tell vaniy		
10	By Hercules!" said Diomed, opening his	eyes,	'why, it would take a man's whole life Pomp		
11	and placed his hated hands before my	eyes,	which I flung from me with violence; " frank		

Sort by KWICpatterns

AntConc

Target Corpus
Name: ChiLit
Files: 71
Tokens: 4424305

KWIC Plot File View Cluster N-Gram Collocate Word Keyword Wordcloud ChatAI

Total Hits: 2284 Page Size 100 hits 1 to 100 of 2284 hits

	File	Left Context	Hit	Right Context
1	amulet.txt	vacant seat next to Robert. And it was when all	eyes	were fixed on the stage where Mr Devant was
2	amulet.txt	ence were fixed on Mr David Devant, Mr David Devant's	eyes	were fixed on the audience. And it happened that
3	canada.txt	the St. Lawrence. "Captain Wilson," said Percival, whose	eyes	were fixed on the water, "what animals are those,
4	crofton.txt	one yet longer; and by the time he returned everybody's	eyes	were fixed on the door, to see what sort
5	girls.txt	that," she said. Here she paused and several pairs of	eyes	were fixed on her. "Poor dolly's b'oke," said the
6	girls.txt	beat--no one glanced at her, no one regarded her; all	eyes	were fixed on Miss Good, who stood with a
7	girls.txt	her side reading a newspaper. Presently she saw that his	eyes	were fixed on her. He spoke in his quietest
8	girls.txt	ry rhyme after nursery rhyme, while the bright beautiful	eyes	were fixed on her face, and the little voice
9	holiday.txt	in the world was ever more miserable than herself. Her	eyes	were fixed on her task, while her thoughts were
10	jungle.txt	strike. Oh, foolish people, who killed my Nag!" Teddy's	eyes	were fixed on his father, and all his father
11	moonfleet....	that Maskew knew this as well as I, for his	eyes	were fixed on the lanthorn. At last he spoke
12	redclyffe.txt	nded warning against the dissipations of Venice, for her	eyes	were fixed on him at first with a look
13	vice.txt	you were to tell me, I think?" Chawner's small glittering	eyes	were fixed on Paul menacingly as he managed to
14	wallypug.txt	what they were." Olive did not at once answer. Her	eyes	were fixed on something she saw passing before the
15	fiord.txt	form of a light cloud hanging over the place. Hund's	eyes	were fixed upon it, when one of his comrades
16	forest.txt	Edward turned round to Patience, and perceived that her	eyes	were fixed upon him, as if she would have
17	glass.txt	she opened her lips, there was dead silence, and all	eyes	were fixed upon her; 'and it's a very curious
18	guatermai	antible nod, she indicated approval. All the while Agon's	eyes	were fixed upon the altar before him apparently in

CQPweb: A hands-on example

- Goal: Understand this [→] guy's rhetoric, terminology, phraseology and topics
- Based on corpus compiled from the **Trump Twitter Archive** [www.thetrumparchive.com]



Your query "make america great again" returned 585 matches in 585 different texts (in 1,332,122 words [56,570 texts]; frequency: 439.15 instances per million words), ordered randomly [0.04 seconds]

< << >> > Show Page: 1 Line View Show in corpus order Choose action... Go!

No.	Text	Solution 1 to 50 Page 1 / 12
1	t1037417543017877500	Join me tomorrow night at 7:00 pm MDT in Billings , Montana for a MAKE AMERICA GREAT AGAIN RALLY ! Get your tickets here : https://t.co/fyHduA2Peo
2	t0761622637235712000	import to get to the White House and defeat #CrookedHillary . Let's Make America Great Again ! https://t.co/u2WQondgqm
3	t0763860288533856300	ounting on your help to defeat Hillary Clinton and her cronies . Let's Make America Great Again ! https://t.co/fSKOfoJz9K
4	t0585269105068007400	ldtrump @cleopatrausa Donald you are the next Ronald Reagan . Make America great again . "" Thank you .
5	t0620994157004357600	t . We are energized & ready to take our country back . Let's Make America Great Again ! https://t.co/u25yl5T7E8
6	t0697825190282182700	He (or she) who hesitates is lost : MAKE AMERICA GREAT AGAIN !
7	t0807427326	Text t0697825190282182700 (length = 15 words) , together , we will MAKE AMERICA GREAT AGAIN ! Watch : ... https://t.co/EyL0o26FqW
8	t0700280013	Day is a BIG day . MAKE AMERICA GREAT AGAIN !
9	t0173200563	DonaldTrump III Make America great again !

CQPweb: A hands-on example

- CQPweb server @ FAU:
<https://corpora.linguistik.uni-erlangen.de/cqpweb/>
- Login: **student1 ... student15** | password: **erlangen**



The screenshot shows the CQPweb login page. At the top left is the CL logo, and at the top right is the CWB logo. The main header reads "Welcome to CQPweb at FAU Erlangen-Nürnberg!" Below it, a sub-header states "This server is maintained by the Chair of Computational Corpus Linguistics". The central part of the page contains fields for "Enter your username:" and "Enter your password:", each with a corresponding input box. Below these is a checkbox labeled "Stay logged in on this computer:". At the bottom of the form are two buttons: "Click here to log in" and "Clear form". A horizontal line separates this from a footer bar containing links for "Create account" and "Full account-control options". The footer also includes the text "Corpora available on this server" and the date "9 Sep 2025".

Simple search

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Trump Twitter Archive: *powered by CQPweb*

Standard Query

make america great again



Query mode: Simple query (ignore case) [Simple query language syntax](#)

Number of hits per page: 50

Match strategy: Standard

Restriction: None (search whole corpus)

[Start Query](#) [Reset Query](#)

System messages 

New Arrangement of Corpora

2018-06-06 The corpora have been newly arranged. If you cannot find a corpus that belongs to you or lost your access privileges, please contact us.

All corpora listed under "Uncategorised" will be deleted in the long run. Please let us know if there are any issues with this.

Concordance (kwic = key word in context)

Your query "make america great again" returned 585 matches in 585 different texts (in 1,332,122 words [56,570 texts]; frequency: 439.15 instances per million words), ordered randomly				
				[0.04 seconds]
No.	Text	Solution 1 to 50	Page 1 / 12	
1	t1037417543017877500	Join me tomorrow night at 7:00 pm MDT in Billings , Montana for a	MAKE AMERICA GREAT AGAIN	RALLY ! Get your tickets here : https://t.co/fyHduA2Peo
2	t0761622637235712000	upport to get to the White House and defeat #CrookedHillary . Let's	Make America Great Again	! https://t.co/u2WQondqqm
3	t0763860288533856300	ounting on your help to defeat Hillary Clinton and her cronies . Let's	Make America Great Again	! https://t.co/ISKOIJ0JZ9K
4	t0585269105068007400	ldtrump @cleopatrausa Donald you are the next Ronald Reagan .	Make America great again	. "" Thank you .
5	t0620994157004357600	t . We are energized & ready to take our country back . Let's	Make America Great Again	! https://t.co/u25yl5T7E8
6	t0697825190282182700	He (or she) who hesitates is lost :	MAKE AMERICA GREAT AGAIN	!
7	t080747326 Text t0697825190282182700 (length = 15 words)	, together , we will	MAKE AMERICA GREAT AGAIN	! Watch : https://t.co/EyL0o26FqW
8	t0700200013 ----- Day: 11 Flagged?: no	sunday is a BIG day .	MAKE AMERICA GREAT AGAIN	!
9	t047330563 Hour: 15 realDonaldTrump ""	realDonaldTrump ""	Make America great again	!
10	t1227206958 Month: 02_February Reply?: no	realDonaldTrump :	MAKE AMERICA GREAT AGAIN	and then , KEEP AMERICA GREAT !
11	t0822006653 Retweet?: no Day of the week: 4_Thursday	we will , together ,	MAKE AMERICA GREAT AGAIN	!
12	t056244915 Year: 2016	Let's together	Make America Great Again	! Vote Trump at https://t.co/YoNf60s0lm
13	t061245976890593300	J.S. is becoming a dumping ground for the world . Pols don't get it .	Make America Great Again	!
14	t068525573943279600	uld only get a small fraction of this 25k crowd in . The movement to	Make America Great Again	is unbelievable ! https://t.co/NHPdGm57YJ
15	t0771145576381427700 she didn't go to Mexico . She doesn't have the drive or stamina to		MAKE AMERICA GREAT AGAIN	!
16	t1000714520766200 Thank you Allentown , Pennsylvania ! Together , we are going to		MAKE AMERICA GREAT AGAIN	! MAKE AMERICA SAFE AGAIN !
17	t0616897546024304600 heguhMantap : @realDonaldTrump you are next President USA ""		MAKE AMERICA GREAT AGAIN	! https://t.co/gsFSghkmdM https://t.co/aA0l8pBEGb https://t.co/ngL
18	t0603631285777596400	in your best interests . Time for the US gov't to do the same . Let's	Make America Great Again	!
19	t1307675370322145300		MAKE AMERICA GREAT AGAIN	!
20	t124755216862552500 great American Patriots who voted for me . AMERICA FIRST , and		MAKE AMERICA GREAT AGAIN	will have a GIANT VOICE long into the future . They will not be di

Extended context display with formatting

Displaying extended context for query match in text **t0697825190282182700**

Select action... Go! Show tags

2016-02-11 00:34:25 [1279, ❤ 4331] I was referring to the fact that Jeb Bush wants to keep common core .

2016-02-11 00:37:51 [1184, ❤ 4258] "" @HARyder : Which is it @realDonaldTrump ? Are you planning on getting rid of Common Core or keeping it ? Get rid of it fast .

2016-02-11 01:12:19 [2927, ❤ 8568] THANK YOU- Clemson , South Carolina ! #MakeAmericaGreatAgain #SCPrimary https://t.co/FgACmaFxxc

2016-02-11 01:51:40 [5097, ❤ 13386] I have been consistent in my opposition to Common Core . Get rid of Common Core --- keep education local !

2016-02-11 13:13:09 [1640, ❤ 5432] There are no buyers for the worthless @NYDailyNews but little Mort Zuckerman is frantically looking . It is bleeding red ink - a total loser !

2016-02-11 14:11:56 [3469, ❤ 9767] Jeb Bush spent more than \$ 40,000,000 in New Hampshire to come in 4 or 5 , I spent \$ 3,000,000 to come in 1st . Big difference in capability !

2016-02-11 14:40:04 [1436, ❤ 4032] . @MarkHalperin showed a focus group on @Morning_Joe me using a very bad word . I never said the word , left an open blank . Please apologize !

2016-02-11 15:14:10 [2589, ❤ 6342] Remember , it was the Republican Party , with the help of Conservatives , that made so many promises to their base , BUT DIDN'T KEEP THEM ! Hi DT

2016-02-11 15:51:04 [2596, ❤ 7190] He (or she) who hesitates is lost : **MAKE AMERICA GREAT AGAIN !** ← this is the match

2016-02-11 18:45:59 [2277, ❤ 7161] Jeb failed as Jeb ! He gave up and enlisted Mommy and his brother (who got us into the quicksand of Iraq) . Spent \$120 million . Weak-no chance !

2016-02-11 19:39:33 [3659, ❤ 9115] We are getting reports from many voters that the Cruz people are back to doing very sleazy and dishonest "" pushpolls "" on me . We are watching !

2016-02-11 22:03:54 [1604, ❤ 5195] Heading to Baton Rouge , Louisiana for a speech . Expecting a very large crowd ! See you soon . #Trump2016 #MakeAmericaGreatAgain

2016-02-11 22:19:33 [1646, ❤ 4445] "" @truthinvest : @CNN @tedcruz @realDonaldTrump Ted Cruz is the definition of sleaze . Just ask @RealBenCarson ""

2016-02-11 23:44:06 [2478, ❤ 5355] Cruz caught cold in lie after denial of push polls like lies w/ @RealBenCarson . How can he preach Christian values ? https://t.co/p3yGL02ABA

2016-02-12 00:06:30 [2179, ❤ 7547] Just landed in Baton Rouge , Louisiana . Reports are out that lines are three quarters of a mile to get in . Wow ! #MakeAmericaGreatAgain

2016-02-12 02:28:28 [3822, ❤ 9677] THANK YOU- Baton Rouge , Louisiana ! WE will #MakeAmericaGreatAgain ! #Trump2016 https://t.co/XV7Ele7A2I

2016-02-12 03:10:52 [2110, ❤ 5156] Weak JEB getting thrown out by management during speech . Do you think he will be this tough on Putin & others ? https://t.co/Tqej1euLVL

2016-02-12 03:20:33 [3357, ❤ 9104] Lying Cruz put out a statement , " Trump &

Sorted concordance: *great*

action menu

Your query "[lemma="great"%ocd]", in subcorpus "Originals", returned 7,332 matches in 6,771 different texts (in 1,084,300 words [43,878 texts]; frequency: 6,761.97 instances per million words), sorted on position +1 (7,332 hits) [0.126 seconds - retrieved from cache]

Sort control: Position: 1 Right Tag restriction: None Starting with: Sort

No.	Text	Solution 2101 to 2150	Page 43 / 147
2101	t1122270956192272400	Sincerest THANK YOU to our great Border Patrol Agent who sto	
2102	t1104017664131907600	hending record numbers of illegal immigrants - but we need the Wall to help our great Border Patrol Agents !	
2103	t1075954128222871600	:ans voted and won , 217-185 . Nancy does not have to apologize . All I want is GREAT BORDER SECURITY !	
2104	t0876899250071904300 getting great border security and healthcare . #VoteRalphNorman tomorrow !	
2105	t1024248479386923000	One of the reasons we need Great Border Security is that Mexico's murder rate in 2017 increased by 27% to 31,1	
2106	t0977855968364171300	ild our Military , many jobs are created and our Military is again rich . Building a great Border Wall , with drugs (poison) and enemy combatants pouring into our Co	
2107	t0968704442110545900	Administration and rejected the attempt to stop the government from building a great Border Wall on the Southern Border . Now this important project can go forwar	
2108	t0830405706255913000	I am reading that the great border WALL will cost more than the government originally thought , but I have	
2109	t0741286391200505900	The great boxing promoter , Don King , just endorsed me . Nice !	
2110	t1198679802913415200	Agnes , your great boy Ronald is looking down , very proud of you ! https://t.co/BHPu6IldAN	
2111	t0564215204154966000	IdTrump @Newsmax_Media @dpatten32 Time for Trump to take charge of the greatest brand in the world , the USA !!!!	
2112	t0263720538923470850	's acquisition of Lucas Film is a smart deal for both sides . Disney just bought a great brand which will keep producing revenue .	
2113	t0862283792559616000	years , as a pol in Connecticut , Blumenthal would talk of his great bravery and conquests in Vietnam - except he was never there . When	
2114	t0334834807483818000	I totally respect that Angelina Jolie has shown such great bravery in the face of danger - she has really come a long and positive way !	
2115	t1060515116700045300 Great bravery shown by police . California Highway Patrol was on scene within 3 mir	
2116	t0979082457340407800	Great briefing this afternoon on the start of our Southern Border WALL ! https://t.co/p	
2117	t0746458701565988900	Many people are equating BREXIT , and what is going on in Great Britain , with what is happening in the U.S. People want their country back !	
2118	t0800887087780294700	Many people would like to see @Nigel_Farage represent Great Britain as their Ambassador to the United States . He would do a great job !	
2119	t05806232025827881200	You rocked both events . The @washingtontopnotch knows it too !! Thank you for a great brunch and a great talk !!	

Frequency breakdown: *fake*

full process history

Query "{fake}", in subcorpus "Originals", returned 1,194 matches in 1,117 different texts (in 1,084,300 words [43,878 texts], frequency: 1,101.17 instances per million words)

Showing frequency breakdown of words in this query, at position 1 to the Right; there are 104 different types and 1,194 tokens at this concordance position.

[0.006 seconds - retrieved from cache]

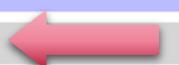
<

<<

>>

>

Breakdown position: 1 Right



Frequency breakdown of words only

Go!

No.	Query result	No. of occurrences	Percent
1	NEWS	902	75.54%
2	and	24	2.01%
3	Dossier	21	1.76%
4	media	19	1.59%
5	&	17	1.42%
6	,	15	1.26%
7	!	9	0.75%
8)	9	0.75%
9	Polls	7	0.59%
10	reporting	7	0.59%
11	Story	7	0.59%
12	Whistleblower	7	0.59%
13	Suppression	6	0.5%
14	:	5	0.42%
15	ballots	5	0.42%
16	(4	0.34%
17	___	3	0.25%
18	@NBCNews	3	0.25%
19	ad	3	0.25%

Time for a closer look: *fake news*

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- Who did it?
- Latest news

Trump Twitter Archive: powered by CQPweb

Standard Query

fake news

Query mode: Simple query (ignore case) [Simple query language syntax](#)

Number of hits per page: 50

Match strategy: Standard

Restriction: Subcorpus: Originals (1,084,300 words in 43,878 texts)

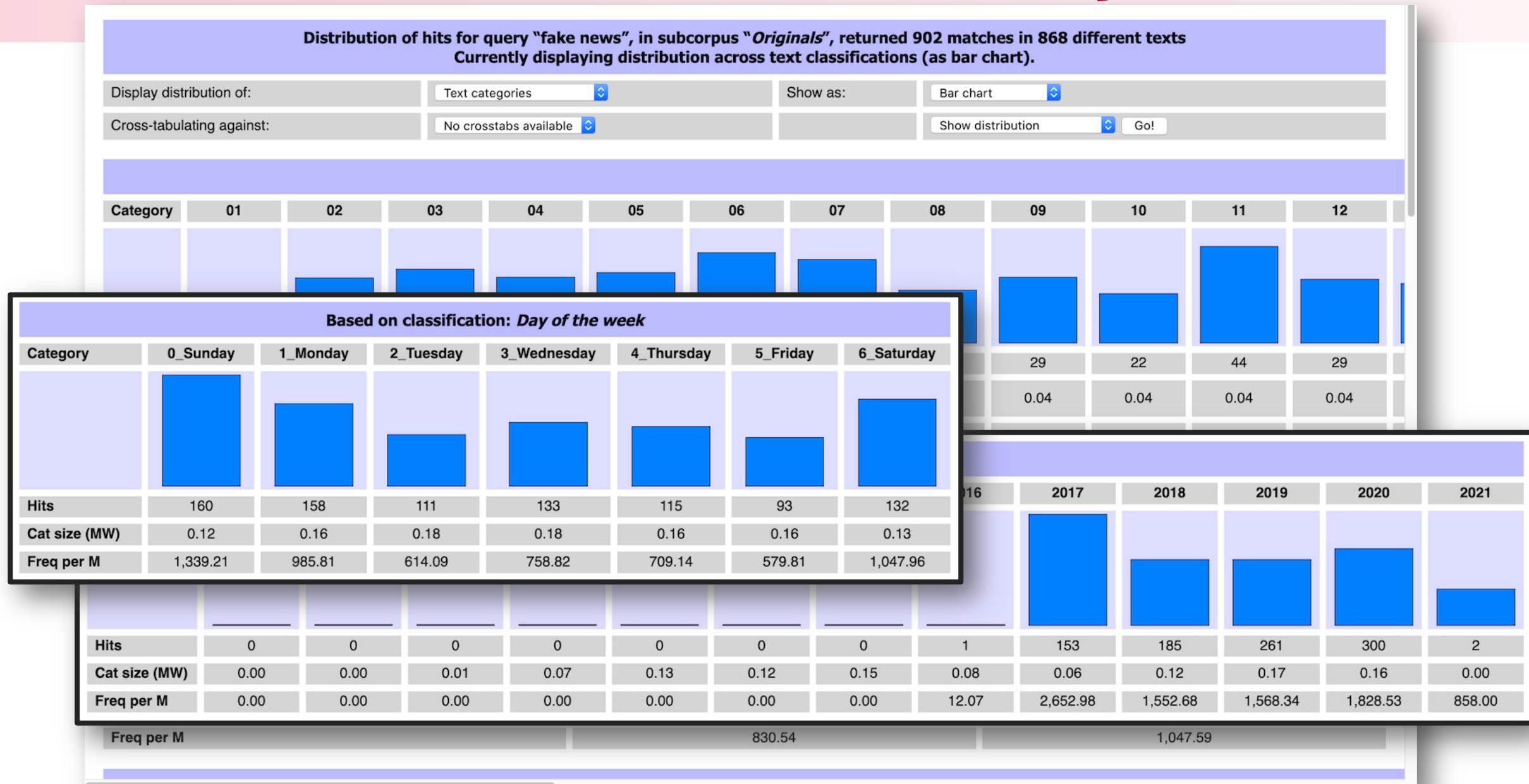
System messages

New Arrangement of Corpora

2018-06-06 The corpora have been newly arranged. If you cannot find a corpus that belongs to you or lost your access privileges, please contact us.

All corpora listed under "Uncategorised" will be deleted in the long run. Please let us know if there are any issues with this.

Distribution across metadata categories



Collocation analysis

key parameters

Collocation controls

Collocation based on: Lemma

Collocation window from: 5 to the Left

Freq(node, collocate) at least: 5

Filter results by: specific collocate: and/or tag: V V

Statistic: Log-likelihood

Collocation window to: 5 to the Right

Freq(collocate) at least: 5

Submit changed parameters Go!

Extra information:

Log-likelihood (LL) scores collocations by significance: the higher the score, the more evidence you have that the association is not due to chance. More frequent words tend to get higher log-likelihood scores, because there is more evidence for such words.

There are 1,497 different lemmas in the collocation database for this query (Query "fake news", in subcorpus "Originals", returned 902 matches in 868 different texts)

0.175 seconds - retrieved from cache]

No.	Lemma	Total no. in this subcorpus	Expected collocate frequency	Observed collocate frequency	In no. of texts	Log-likelihood
1	report	615	5.116	39	39	92.712
2	cover	156	1.298	18	18	63.171
3	refuse	176	1.464	17	17	53.748
4	be	35,694	296.929	423	361	49.536
5	doesn't	249				
6	mention	129				
7	say	1,987				
8	talk	677				
9	refer	52				
10	hate	242				
11	try	548				
12	go	2,877	23.933	45	42	14.898

click for examples

Choose settings for proximity-based collocations:

Include annotation: Include Exclude

POS-disambiguated lemma: Include Exclude

Part of speech: Include Exclude

Maximum window span: + / - 5

Create collocation database

CQPweb exercise

- Activate corpus **ParlSpeech UK**
 - corpus of debates of the UK parliament 1988–2019
 - Rauh, C. & Schwalbach, J. (2020). The ParlSpeech V2 data set: Full-text corpora of 6.3 million parliamentary speeches in the key legislative chambers of nine representative democracies. <https://doi.org/10.7910/DVN/L4OAKN>
 - ~ 2 M turns with a total of ~ 400 M tokens
- Concordance analysis for query: **water and sanitation**
 - what recurrent patterns can you identify?
 - can you find evidence for larger units of meaning?

Again: How can concordancing software help?

- Most concordancing tools provide very similar functionality: kwic display (paged or scrollable), extended context view, random shuffle, sort by left/right context, filter by context words, frequency counts, metadata distribution, ...
- Not much innovation since first concordances (Sinclair 1966)
- Each tool has one special gimmick (and new tool for each new idea)
 - #LancsBoxX: collocation graphs
 - AntConc: KWIC patterns
 - Sketch Engine: word sketches & sketch differences
- **We need a more systematic approach for true innovation!**

Practices in different disciplines: strategies

- 10 articles / case studies per discipline (40 total)
 - Lexicography
 - Data-driven learning
 - Corpus-assisted discourse studies
 - Literary stylistics
 - post-2000 publication; concrete examples
 - not included: studies using parallel or learner corpora
- Content analysis of methods sections (not literature review)
- Challenge: no systematic standards for describing methodology, mix of tool and method

Selecting

Sampling

A random **sample** of 100 concordances of each pair was, subsequently, closely examined for semantic prosody. (**Lexicography**)

Filtering

A concordance **query** for *carry out* with *research* in the context of three tokens to the left and to the right returned 160 hits, and most lines indeed exhibited the collocation *carry out research*, as exemplified in Figure 8, (**Lexicography**)

Selecting

Cleaning

As we were interested in lexical compounds linked to carbon dioxide rather than carbon as an element, such lexical combinations as, for example, *carbon molecule* or *carbon fibre* **were removed**. Nonsensical combinations as well as duplicates arising from differences in spelling such as *carbon offset* and *carbon-offset* **were also eliminated. (CADS)**

Threshold

We analysed the first 500 concordances of *seguire* chosen as “good examples” by the Sketch Engine (cf. Kilgarriff et al., 2008) **(Lexicography)**

Ordering

Sorting

WordSmith Tools was mainly used for **sorting** and categorising concordances because it allows the analyst to assign values to lines and to move easily from concordance to text. [Figure 3 shows sorting by 1R] (**CADS**)

The students were then instructed to search for the preceding underlined word *friendship* using IntelliText, and to examine the concordance lines to identify which preposition should follow *friendship* in this context, by **sorting** right or left contexts in keyword-in-context (KWIC) lines. (**DDL**)

Ordering

Ranking

We analysed the **first 500** concordances of *seguire* chosen as “good examples” by the Sketch Engine (cf. Kilgarriff et al., 2008)

(Lexicography)

Grouping

collocations ... established manually through sorted concordances

the researcher is normally required to analyse hundreds of lines of concordance data by hand, in order to identify wider themes or patterns in the corpus which are not so easily spotted via collocation, key word or frequency analysis. The analyst then **has to make sense of the linguistic patterns** thrown up via the corpus-based processes, **usually with reference to one or more theoretical frameworks**

close analysis of expanded concordances (or whole texts, when necessary) revealed

(CADS)

Orientation

What we have learned so far ...

- Reading concordances with (and without) the help of software tools
- How to identify recurrent patterns and interpret them
- Strategies and algorithms for organising concordance lines

What we're going to look at now ...

- A mathematical framework for reading concordances with algorithms
- What further algorithms could be useful?
- How can we document the concordance reading process?

Our goal

Goal: Develop mathematical framework for computational algorithms used to organise concordance lines in the concordance reading process.

- Tightly connected to kwic-style display of concordance lines
- **Limitation:** only algorithms that can be understood as a rearrangement of concordance lines → makes generic UI possible
- Focus on three main general strategies in current practice

But why?

Why not just invent some really cool new algorithms
and implement them in #FAUbox or EverConc?

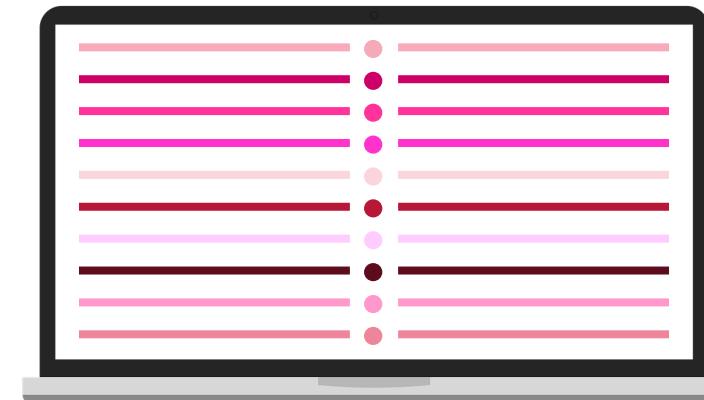
But why?

- Community needs general framework, not another app
- Make novel algorithms available in many (all) concordancers
- Specify precise semantics of algorithms
- Combining algorithms: limitations
- Consistent visualisation in UI
- Formal model of organising concordances
- Research documentation

Concordance reading strategies

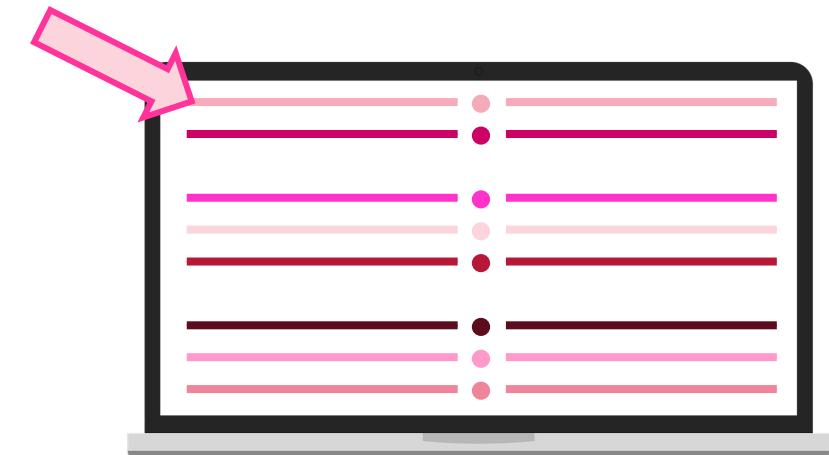


Selecting



Ordering

Sorting / Ranking



Grouping

Partitioning/Clustering

From strategies to algorithms

1. Selecting

- “zoom in” on a **subset** of the concordance lines
- either focus on specific pattern or discard unwanted lines

2. Ordering

- change **sequential ordering** of concordance lines in the display
- may want to combine multiple ordering criteria to break ties

3. Grouping

- form groups of related concordance lines
- requires **structured kwic display** in UI

From strategies to algorithms

1. Selecting

- “zoom in” on a **subset** of the concordance lines
- either focus on specific pattern or discard unwanted lines

2. Ordering

- a) **Sorting**: reorder lines based on pairwise comparison
 - b) **Ranking**: reorder lines based on preference score
- combine multiple Sorting and Ranking algorithms to break ties

3. Grouping

- form groups of related concordance lines
- requires **structured kwic display** in UI

From strategies to algorithms

1. Selecting

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3. Grouping

- a) **Partitioning**: groups based on common property
- b) **Clustering**: (nested) groups based on pairwise similarity
- requires structured kwic display in UI

Combining algorithms

1. Selecting

- “zoom in” on a **subset** of the concordance lines
- either focus on specific pattern or discard unwanted lines

2. Ordering

- a) **Sorting**: reorder lines based on pairwise comparison
- b) **Ranking**: reorder lines based on preference score
- combine multiple Sorting and Ranking algorithms to break ties

3. Grouping

- a) **Partitioning**: groups based on common property
- b) **Clustering**: (nested) groups based on pairwise similarity
- requires structured kwic display in UI

subset **arrangement**

The analysis tree



Our model of concordance reading: **analysis tree**

- Selecting creates branches that “zoom in” on a subset of lines
→ **subset node**
 - investigate different patterns with each branch
 - turns history of operations into a hierarchical tree structure
- Ordering and Grouping algorithms change how this subset is displayed to the analyst → **arrangement node**
 - different arrangements of the same subset are siblings in the tree
 - default arrangement: original corpus order
- Each node corresponds to a **concordance view**

Combining algorithms

- Subset operations can be applied in parallel or nested
 - consecutively narrow down to smaller subsets → structure of tree
- Arrangement operations form alternative views of a subset
 - consequence: can't "stack" multiple arrangements
 - combine sequence of **Ordering** algorithms as tie-breakers
 - multiple **Grouping** algorithms cannot (or should not) be combined
- Arrangement node = ≤ 1 **Grouping** + sequence of **Ordering** algo's
 - **Grouping** determines main structure, **Ordering** applies within groups

Corpus

DNOV-CWB

Analysis Tree

Query

"eyes" %c

Partition / Cluster ▼



Make selection ▼

♥ Bookmark

Welcome to

CandyConc

images do not represent actual gameplay

Corpus

DNOV-CWB

root node

Analysis Tree

Query result (4031)

Query

"eyes" %c

Partition / Cluster ▼



Make selection ▼

Bookmark

1	BH 1	ing on the gunwales of barges and small boats . Fog in the	eyes	and throats of ancient Greenwich pensioners , wheezing by
2	BH 3	m very cheerful , but I can not quite help their coming to my	eyes	. There ! I have wiped them away now and can go on again
3	BH 3	f of the coach , brushed one of his large furry cuffs across my	eyes	(but without hurting me) , and showed me that it was wet .
4	BH 3	e greatest astonishment . But I thought that he had pleasant	eyes	, although he kept on muttering to himself in an angry man
5	BH 3	osegay of geraniums and told me I had been the light of his	eyes	-- indeed the old man said so!-- what a heart I had then ! Ar
6	BH 3	ut it than I ought to have been ; and when I had cooled my	eyes	with lavender water , it was time to watch for London . I was
7	BH 3	n a beautiful girl ! With such rich golden hair , such soft blue	eyes	, and such a bright , innocent , trusting face ! " Miss Ada ! ,
8	BH 3	ut it ; and the fire , which had left off roaring , winked its red	eyes	at us -- as Richard said -- like a drowsy old Chancery lion .
9	BH 3	fore it was quite said and whispered . His lordship , with his	eyes	upon his papers , listened , nodded twice or thrice , turned
10	BH 4	Ir. Kenge , standing with his back to the fire and casting his	eyes	over the dusty hearth - rug as if it were Mrs. Jellyby 's biogr
11	BH 4	inutive , plump woman of from forty to fifty , with handsome	eyes	, though they had a curious habit of seeming to look a long
12	BH 4	thing , " Go along , you naughty Peepy ! " and fixed her fine	eyes	on Africa again . However , as she at once proceeded with
13	BH 4	ing him to me ? " Shaking her golden hair , Ada turned her	eyes	upon me with such laughing wonder that I was full of wonder
14	BH 4	died , she remembered how the tears would come into her	eyes	when she spoke of him and of the noble generosity of his char
15	BH 4	was painfully awake and vainly tried to lose myself , with my	eyes	closed , among the scenes of the day . At length , by slow
16	BH 4	nd day was feebly struggling with the fog when I opened my	eyes	to encounter those of a dirty - faced little spectre fixed upon
17	BH 5	Richard , answering what he saw in Ada 's compassionate	eyes	, took the opportunity of laying some money , softly and unde
18	BH 6	of themselves , would have made a pretty large town in my	eyes	; and at last we got into a real country road again , with wind
19	BH 6	ring sudden in his manner and a pleasant expression in his	eyes	images do not represent actual gameplay
20	BH 6	, glancing at Richard and Ada , who entreated me with their	eyes	on to speak] , " that perhaps she was a little unmindful of her

Corpus

DNOV-CWB

root node

Analysis Tree

Query result (4031) arrangement node

- sort: random

Query

"eyes" %c

Partition / Cluster ▼

Sort

random



Make selection ▼

Bookmark

151	MC 39	you my word , as if he had been Mark Tapley . I opened my	eyes	, I can tell you , when he did so ; but I could not fancy I had
152	DS 29	confidence of many years is destroyed in an instant , when my	eyes	are opened all at once , and when I find you revealed in you
153	BH 55	hitened wall , leans her honest forehead upon it , wipes her	eyes	with her serviceable grey cloak , and quite enjoys herself lik
154	DS 50	Iness that lies to lightly there ! Ay , look down on the closed	eyes	, Walter , with a proudly tender gaze ; for in all the wide wid
155	OT 17	n pulses of passion or feeling , which , presented before the	eyes	of mere spectators , are at once condemned as outrageous
156	DS 33	g her head after resting it for a moment on both hands , her	eyes	met those of Harriet . In a moment , Harriet was at the door
157	BH 23	aid Mrs. Jellyby , still opening her letters , casting her bright	eyes	smilingly over them , and sorting them as she spoke] , " tha
158	LD 9	ad had no sight for the tears now standing in the colourless	eyes	; though he had had no hearing for the sob that checked the
159	TTC 21	man spoke when they entered the wine - shop , though the	eyes	of every man there were turned upon them . " Good day , g
160	OMF 22	ere , he now directed a scowling look into Fledgeby 's small	eyes	for the effect of the opposite treatment . Satisfied by what h
161	OT 14	s home four times a - year , that it brought the tears into her	eyes	to talk about them . When the old lady had expatiated , a lo
162	HT 13	s Rachael . Seen across the dim candle with his moistened	eyes	, she looked as if she had a glory shining round her head . I
163	OMF 16	Old Betty was proud , and said it with a sparkle in her bright	eyes	. ' Yes , but there are some little comforts that you would n't
164	DS 51	t Mr Pitt , upon the bookcase , represents it . That there are	eyes	in its own map , hanging on the wall . ' An unusually cold sp
165	BH 28	e hand with which she has caught it , and standing with her	eyes	fixed on the fire , puts it about and about between her own
166	PP 54	here was enough of the cannibal in the young gentleman 's	eyes	to render the compliment a double one . ' Dear me , Joseph
167	GE 17	ening that she had curiously thoughtful and attentive eyes ;	eyes	that were very pretty and very good . It came of my lifting up
168	LD 5	d to you to suspect-- ' At the word Suspect , she turned her	eyes	momentarily upon her son , with a dark frown . She then su
169	DC 16	ting themselves - that they seemed to twinkle instead of his	eyes	images do not represent actual gameplay quite
170	DS 10	d a most excellent man , Sir] , ' pursued Walter , raising his	eyes	wit a look or entreaty in the Captain 's behalf] , ' was so go

Corpus

DNOV-CWB

root node

Analysis Tree

Query result (4031) arrangement node

► sort: random

- select: within suspension (276)

subset node

Query

"eyes" %c

Partition / Cluster ▼

Sort random

Make selection ▼

Bookmark

1	LD 16	stopping for a moment with a good - humoured laugh in his	eyes	, and laying his closed right hand , with its peculiar supple
2	BR 37	, I have slept so soundly [, ' said Lord George , rubbing his	eyes	and looking round the room] , ' that I do n't remember quite
3	DS 47	/hen you give Mrs Dombey to understand [--the light in his	eyes	fell upon her as he separated his words each from each , w
4	DS 61	sh sorry [, ' said Cousin Feenix , lifting his wristbands to his	eyes	in the simplest manner possible , and without the least conc
5	OT 37	ippose , a married man [, ' replied Mr. Bumble , shading his	eyes	with his hand , and surveying the stranger , from head to fo
6	NN 22	e place . '' Well , when I was there [, ' resumed Smike ; his	eyes	sparkling at the prospect of displaying his abilities] ; ' I coul
7	DS 40	ch a nature now,'--he [fancied he saw tears glistening in her	eyes	, and he thought , complacently , that he had forced them fr
8	BH 4	Mr. Kenge , standing with his back to the fire and casting his	eyes	over the dusty hearth - rug as if it were Mrs. Jellyby 's biogr
9	DS 17	oked pleasant . ' You see [, ' began the Captain , rolling his	eyes	slowly round the little room , and taking in as much of it as h
10	OMF 3	Eugene , leaning back , folding his arms , smoking with his	eyes	shut , and speaking slightly through his nose] , ' of Energy .
11	DC 39	I do n't think , Trotwood [, ' returned Agnes , raising her soft	eyes	to mine] , ' I would consider that . Perhaps it would be bette
12	BH 9	ray and regarding me , as I again strangely felt , though my	eyes	were not directed to him , with his late intent look] , " I am a
13	BH 23	aid Mrs. Jellyby , still opening her letters , casting her bright	eyes	smilingly over them , and sorting them as she spoke] , " tha
14	DS 10	d a most excellent man , Sir [, ' pursued Walter , raising his	eyes	with a look of entreaty in the Captain 's behalf] , ' was so go
15	DS 20	r . Notwithstanding which , Ma'am [, ' he added , raising his	eyes	from his plate , and casting them across Princess 's Place ,
16	BH 26	wo n't sit down like a Christian [, " says Mr. George with his	eyes	musingly fixed on Judy] , " I ca n't comprehend . " " She kee
17	OMF 38	ollecting [, ' said Mrs Boffin , with her work abandoned , her	eyes	upon the fire , and her chin upon her hand] , ' do you recolle
18	DS 22	onder [, ' said Biler , blubbering outright , and smearing his	eyes	with his coat - cuff] , ' that I have n't been and drownded my
19	OMF 25	into tears . ' I think , R.W. [, ' cried Mrs Wilfer , lifting up her	eyes	images do not represent actual gameplay
20	DS 46	uttered the old woman , watching her daughter with her red	eyes	; ' so easy and so trim a - horseback , while we are in the m

root node

Analysis Tree

Query result (4031) **arrangement node**

► sort: random

► select: within suspension (276)

• sort: right context

subset node

101	LD 14	Ie Dorrit began , sitting before the pale fire , and raising her	eyes	again to the face which in its harmonious look of interest , a
102	NN 31	. ' Oh [! ' said Newman , throwing some intelligence into his	eyes	all at once , and dropping them on his master] , ' I thought :
103	BH 47	orge [, " says Allan , following the direction of the trooper 's	eyes	along the entry] , " have not been much acquainted , as yo
104	OMF 25	into tears . ' I think , R.W. [, ' cried Mrs Wilfer , lifting up her	eyes	and apostrophising the air] , ' that if you were present , it w
105	TTC 44	gement that may be [, " said Miss Pross , striving to dry her	eyes	and compose herself] , " I have no doubt it is best that Mrs.
106	GE 39	ng , Pip [, " said he , after again drawing his sleeve over his	eyes	and forehead , as the click came in his throat which I well re
107	BH 14	, my dear . I suppose [, " said Mr. Turveydrop , shutting his	eyes	and lifting up his shoulders with modest consciousness] , "
108	HT 23	Yonder , among the trees [, ' he added , having lifted up his	eyes	and looked about ; for he had watched her closely until now
109	BR 37	, I have slept so soundly [, ' said Lord George , rubbing his	eyes	and looking round the room] , ' that I do n't remember quite
110	OCS 6	the first is dead , sweet Nell [, ' said Quilp , wrinkling up his	eyes	and luring her towards him with his bent forefinger] , ' to be
111	OMF 61	ching her cheek , with a grave smile , as she cast down her	eyes	and pouted again] ; ' look at me . I want to speak to you . '
112	MC 9	dergone in consequence [, ' cried Mrs Todgers , raising her	eyes	and shaking her head] , ' no one would believe ! ' Just like
113	BH 15	go out ? " As often as I can [, " said Charley , opening her	eyes	and smiling] , " because of earning sixpences and shillings
114	LD 70	e best , my own [, ' she answered , laughing with glistening	eyes	and standing on tiptoe to kiss him] , ' if you will only humour
115	DS 31	e stooping of his neck , which the revelations making by his	eyes	and teeth proclaim to be a lie] , ' I am proud to see that my
116	MC 50	e time now drawing on [, ' said the old man , hurriedly -- his	eyes	and whole face brightening as he spoke--'will] make amende
117	DS 20	ng his head at the unconscious Miss Tox , while his starting	eyes	appeared to make a leap towards her] , ' you might do that
118	BH 58	st I could do . " You find me [, " says Sir Leicester , whose	eyes	are much attracted towards him] , " far from well , George F
119	BH 41	he returns without looking up from the ground on which her	eyes	images do not represent actual gameplay
120	LD 48	nsence of mind . ' Pray [, ' asked Lord Decimus , casting his	eyes	around the table] , ' what is this story I have heard of a ger

Corpus

DNOV-CWB

root node

Analysis Tree

Query result (4031) arrangement node

► sort: random

► select: within suspension (276)

- sort: right context
- sort: left context

subset node

siblings

Query

"eyes" %c

Partition / Cluster ▼

Sort

by left context



Make selection ▼

Bookmark

101	OMF 59	es n't know anything about it [, ' with a sob , and wiping her eyes] , ' why , it wo n't matter to him . I see the service in the Pray
102	DC 60	' of doing good ; and if I could spare my brother [, ' with her eyes upon me] , ' perhaps the time could not . '' What I am , you
103	DS 27	looking round . ' Shall I tell you [, ' she continued , with her eyes fixed on her mother] , ' who already knows us thoroughly , a
104	OMF 58	a wink . ' I must own [, ' returned the dressmaker , with her eyes upon her work] , ' that we are not good friends at present . '
105	DC 45	' said Mrs. Markleham , mechanically following her with her eyes , ' to find a man at Doctor Strong 's time of life , with the stre
106	DS 52	Ith [, ' said the Grinder , glancing at Alice , who sat with her eyes fixed , as it seemed to him , on the wall behind him , but in
107	OMF 15	at then ? '' Why then [, ' said Mrs Boffin , speaking with her eyes closed , and her left hand thoughtfully touching her brow] ,
108	LD 14	g at him in a suppliant way , and gradually withdrawing her eyes as he looked at her] , ' whether you would advise me what
109	DS 23	brig as a lad is capable on . Wal'r [, ' said the Captain , his eyes glistening with the praise of his young friend , and his hook
110	PP 23	great advantage of this , Mr. Weller [, ' continued Job , his eyes filling with tears as he spoke] , ' will be , that I shall be able
111	PP 27	pose . ' Certainly , Sam , certainly [, ' said Mr. Pickwick , his eyes glistening with delight at this manifestation of filial feeling or
112	MC 50	o time now drawing on [, ' said the old man , hurriedly -- his eyes and whole face brightening as he spoke--'will] make amende
113	MC 19	o limitation , there is positively NO limitation [' --opening his eyes wide , and standing on tiptoe--'in] point of expense ! I have
114	NN 22	e place . '' Well , when I was there [, ' resumed Smike ; his eyes sparkling at the prospect of displaying his abilities] ; ' I coul
115	OCS 3	said the dwarf , who with his hand stretched out above his eyes had been surveying the young man attentively] , ' that shou
116	OMF 42	I the Reverend Frank Milvey , brushing his hand across his eyes , ' when it has that homely figure on it . Richer , I think , tha
117	BR 76	ith , stopping in a narrow count to pass his hand across his eyes , ' I could better afford to lose than Barnaby . We have alwa
118	BR 36	he secretary , drawing his sleeve in a hasty way across his eyes ; ' and why should I regret your having heard them ? '' Gas
119	NN 52	ink and cough very much , for he was no smoker): and his eyes images do not represent actual gameplay I se
120	OMF 39	noody silence , with his hands clasped behind him , and his eyes suspiciously wandering about Wegg.--'No] ! stop there . I kn

Corpus

DNOV-CWB

root node

Analysis Tree

Query result (4031) **arrangement node**

▶ sort: random

▶ select: within suspension (276)

- sort: right context
- sort: left context

- **partition:** by POS tag @ L1,
sort: left context

siblings**subset node**

Query

"eyes" %c

Partition / Cluster ▼

partition by POS tag of token L1

Sort

by left context



Make selection ▼

Bookmark

No.	Query result	No. of occurrences	Percent
1	PRP\$	211	76.45%
2	JJ	37	13.41%
3	VBG	9	3.26%
4	NN	5	1.81%
5	DT	4	1.45%
6	WP\$	3	1.09%
7	IN	2	0.72%
8	POS	2	0.72%
9	VBN	2	0.72%
10	CC	1	0.36%

images do not represent actual gameplay

root node

Analysis Tree

Query result (4031) **arrangement node**

► sort: random

► select: within suspension (276)

• sort: right context

• sort: left context

• partition: by POS tag @ L1,
sort: left context

► select: set [PRP\$] (211)

subset node**subset**

1	OMF 38	ollecting [, ' said Mrs Boffin , with her work abandoned , her	eyes	upon the fire , and her chin upon her hand] , ' do you recollect
2	BH 49	red thousand thanks , old fellow [, " says Mrs. Baguet , her	eyes	sparkling with pleasure and her hand stretched out to him]
3	BH 22	brought into my head , master [, " returns the woman , her	eyes	filling with tears] , " when I look down at the child lying so .
4	OT 24	' she cried , jumping fiercely up : her face flushed , and her	eyes	starting from her head--I] robbed her , so I did ! She was n'
5	OMF 42	netimes I have fancied , sir [, ' said Bella , turning away her	eyes]	, ' that your great regard for Mrs Boffin is a very powerful m
6	DS 18	I , if ever there was one [, ' said Mrs Chick , drying both her	eyes	at once with great care on opposite corners of Miss Tox 's h
7	OT 7	deed . ' Ah [! ' said Mr. Bumble , when the lady brought her	eyes	down to earth again] ; ' the only thing that can be done now
8	LD 2	' Not [, ' said Pet , apologetically and embarrassed by her	eyes]	, ' not , of course , that we are any company to you , or that
9	BH 8	ng that her spectacles were made the less engaging by her	eyes	being what Ada called] " choking eyes " , " meaning very pr
10	BH 23	Miss Summerson [, " said Mrs. Jellyby , sweetly casting her	eyes	for a moment on me and considering where to put the parti
11	PP 22	tared wildly at her . ' Wretch [, ' said the lady , covering her	eyes	with her hands] , ' what do you want here ? '' Nothing , ma
12	HT 9	not yours . '' Dear Miss Louisa [, ' said Sissy , covering her	eyes	, and sobbing yet] ; ' I came home from the school that afte
13	OMF 61	ching her cheek , with a grave smile , as she cast down her	eyes	and pouted again] ; ' look at me . I want to speak to you . ''
14	LD 55	eneral . '' Mr Dorrit [, ' said Mrs General , casting down her	eyes	as she rose with a bend] , ' must ever claim my homage an
15	DS 58	. ' I need not remind you [, ' said Harriet , casting down her	eyes	upon her black dress] , ' through what means our circumsta
16	OMF 25	ith stately resignation as she shook her head and dried her	eyes]	; ' we have at present no stipendiary girl to do so . We have
17	ED 13	ue . ' If we knew yesterday [, ' said Rosa , as she dried her	eyes]	, ' and we did know yesterday , and on many , many yester
18	DS 2	always be a balm and comfort to me [, ' here she dried her	eyes]	; ' it becomes necessary to provide a Nurse . '' Oh ! Ah ! ' s
19	TTC 44	gement that may be [, " said Miss Pross , striving to dry her	eyes	images do not represent actual gameplay
20	DC 51	a gleam of light upon me , Trot [, ' said my aunt , drying her	eyes]	, ' when I formed the resolution of being godmother to your

root node

Analysis Tree

Query result (4031) **arrangement node**

► sort: random

► select: within suspension (276)

• sort: right context

• sort: left context

• partition: by POS tag @ L1,
sort: left context

► select: set [PRP\$] (211)

• sort: by L1

subset node**subset****siblings**

1	OMF 38	ollecting [, ' said Mrs Boffin , with her work abandoned , her	eyes	upon the fire , and her chin upon her hand] , ' do you recollect
2	BH 49	red thousand thanks , old fellow [, " says Mrs. Baguet , her	eyes	sparkling with pleasure and her hand stretched out to him]
3	BH 22	brought into my head , master [, " returns the woman , her	eyes	filling with tears] , " when I look down at the child lying so .
4	OT 24	' she cried , jumping fiercely up : her face flushed , and her	eyes	starting from her head--I] robbed her , so I did ! She was n'
5	OMF 42	netimes I have fancied , sir [, ' said Bella , turning away her	eyes]	, ' that your great regard for Mrs Boffin is a very powerful m
6	DS 18	I , if ever there was one [, ' said Mrs Chick , drying both her	eyes	at once with great care on opposite corners of Miss Tox 's h
7	OT 7	deed . ' Ah [! ' said Mr. Bumble , when the lady brought her	eyes	down to earth again] ; ' the only thing that can be done now
8	LD 2	' Not [, ' said Pet , apologetically and embarrassed by her	eyes]	, ' not , of course , that we are any company to you , or that
9	BH 8	ng that her spectacles were made the less engaging by her	eyes	being what Ada called] " choking eyes " , " meaning very pr
10	BH 23	Miss Summerson [, " said Mrs. Jellyby , sweetly casting her	eyes	for a moment on me and considering where to put the parti
11	PP 22	tared wildly at her . ' Wretch [, ' said the lady , covering her	eyes	with her hands] , ' what do you want here ? ' ' Nothing , ma
12	HT 9	not yours . ' Dear Miss Louisa [, ' said Sissy , covering her	eyes	, and sobbing yet] ; ' I came home from the school that afte
13	OMF 61	ching her cheek , with a grave smile , as she cast down her	eyes	and pouted again] ; ' look at me . I want to speak to you . '
14	LD 55	eneral . ' Mr Dorrit [, ' said Mrs General , casting down her	eyes	as she rose with a bend] , ' must ever claim my homage an
15	DS 58	. ' I need not remind you [, ' said Harriet , casting down her	eyes	upon her black dress] , ' through what means our circumsta
16	OMF 25	ith stately resignation as she shook her head and dried her	eyes]	; ' we have at present no stipendiary girl to do so . We have
17	ED 13	ue . ' If we knew yesterday [, ' said Rosa , as she dried her	eyes]	, ' and we did know yesterday , and on many , many yester
18	DS 2	always be a balm and comfort to me [, ' here she dried her	eyes]	; ' it becomes necessary to provide a Nurse . ' Oh ! Ah ! ' s
19	TTC 44	gement that may be [, " said Miss Priss , striving to dry her	eyes	images do not represent actual gameplay
20	DC 51	a gleam of light upon me , Trot [, ' said my aunt , drying her	eyes]	Mrs.

root node

Analysis Tree

Query result (4031) **arrangement node**

► sort: random

► select: within suspension (276)

• sort: right context

• sort: left context

• partition: by POS tag @ L1,
sort: left context

► select: set [PRP\$] (211)

• sort: by L1

• sort: by L1,
sort: right context**subset node****subset**

Sort

by L1

Sort

by right context 

Bookmark

1	BH 30	ith us . " Well , my dear Esther [, " she returned , drying her	eyes	, " I must do the best I can and trust to my dear Prince neve
2	HT 4	circus [, ' muttered Louisa , haughtily , without lifting up her	eyes	, ' and father caught us . '' And , Mrs. Gradgrind [, ' said he
3	ED 13	rue . ' If we knew yesterday [, ' said Rosa , as she dried her	eyes	, ' and we did know yesterday , and on many , many yester
4	NN 49	gives me great pain [, ' continued Mrs Nickleby , drying her	eyes	, ' great pain ; but do n't hurt a hair of his head , I beg . On r
5	DS 3	my Mama [, ' returned the child , with tears springing to her	eyes	, ' in any frock . '' But people put on black , to remember pe
6	NN 34	culty . And even this [, ' said Madame Mantalini , wiping her	eyes	, ' is not the worst . He took some papers of value out of my
7	NN 37	her . I think I see him now [! ' said Mrs Nickleby , wiping her	eyes	, ' looking at me while I was talking to him about his affairs ,
8	LD 2	'' Not [, ' said Pet , apologetically and embarrassed by her	eyes	, ' not , of course , that we are any company to you , or that
9	HT 32	this . '' Deed , I am loath [, ' returned Rachael , drying her	eyes	, ' that any here should see me like this ; but I wo n't be see
10	LD 41	ha -- on this or any other occasion [, ' Mrs General shut her	eyes	, ' that I -- ha hum -- am not pleased with you . You make M
11	BR 51	tately , Varden [, ' said his wife , with her handkerchief to her	eyes	, ' that in case any more disturbances should happen -- whi
12	OMF 28	n vain to sustain it ; for the look dropped as it lighted on her	eyes	, ' that it might be so superfluous as to be almost impertiner
13	OMF 42	netimes I have fancied , sir [, ' said Bella , turning away her	eyes	, ' that your great regard for Mrs Boffin is a very powerful m
14	DC 48	gently trying to remove the handkerchief she pressed to her	eyes	, ' this is not only very ridiculous of you , but very wrong . In
15	DC 45	' said Mrs. Markleham , mechanically following her with her	eyes	, ' to find a man at Doctor Strong 's time of life , with the stre
16	MC 40	d kindly . ' Which shows [, ' said Mrs Gamp , casting up her	eyes	, ' what a little way you 've travelled into this wale of life , my
17	OCS 41	d . ' Oh Kit [! ' said his mother , with her handkerchief to her	eyes	, ' what have you done ! I never can go there again -- never
18	LD 14	th all the earnestness of her soul looking steadily out of her	eyes	, ' what I am going to ask you not to do ? '' I think I can .
19	DC 51	a gleam of light upon me , Trot [, ' said my aunt , drying her	eyes	our images do not represent actual gameplay
20	OMF 59	es n't know anything about it [, ' with a sob , and wiping her	eyes	, ' why , it wo n't matter to him . I see the service in the Pray

Corpus

DNOV-CWB

root node

Analysis Tree

Query result (4031)

arrangement node

sort: random

select: within suspension (276)

• sort: right context

• sort: left context

• partition: by POS tag @ L1,

sort: left context

- ▶ select: set [PRP\$] (211)
- sort: by L1
- sort: by L1,
sort: right context

subset node

subset



bookmark

siblings

path from
root node

Query

"eyes" %c

Partition / Cluster ▼

Sort

by L1

Sort

by right context



Make selection ▼

Bookmark

1	BH 30	ith us . " Well , my dear Esther [, " she returned , drying her	eyes]	, " I must do the best I can and trust to my dear Prince neve
2	HT 4	circus [, ' muttered Louisa , haughtily , without lifting up her	eyes]	, ' and father caught us . '' And , Mrs. Gradgrind [, ' said he
3	ED 13	rue . ' If we knew yesterday [, ' said Rosa , as she dried her	eyes]	, ' and we did know yesterday , and on many , many yester
4	NN 49	gives me great pain [, ' continued Mrs Nickleby , drying her	eyes]	, ' great pain ; but do n't hurt a hair of his head , I beg . On r
5	DS 3	my Mama [, ' returned the child , with tears springing to her	eyes]	, ' in any frock . '' But people put on black , to remember pe
6	NN 34	culty . And even this [, ' said Madame Mantalini , wiping her	eyes]	, ' is not the worst . He took some papers of value out of my
7	NN 37	her . I think I see him now [! ' said Mrs Nickleby , wiping her	eyes]	, ' looking at me while I was talking to him about his affairs ,
8	LD 2	'' Not [, ' said Pet , apologetically and embarrassed by her	eyes]	, ' not , of course , that we are any company to you , or that
9	HT 32	this . '' Deed , I am loath [, ' returned Rachael , drying her	eyes]	, ' that any here should see me like this ; but I wo n't be see
10	LD 41	ha -- on this or any other occasion [, ' Mrs General shut her	eyes]	, ' that I -- ha hum -- am not pleased with you . You make M
11	BR 51	tately , Varden [, ' said his wife , with her handkerchief to her	eyes]	, ' that in case any more disturbances should happen -- whi
12	OMF 28	n vain to sustain it ; for the look dropped as it lighted on her	eyes]	, ' that it might be so superfluous as to be almost impertiner
13	OMF 42	netimes I have fancied , sir [, ' said Bella , turning away her	eyes]	, ' that your great regard for Mrs Boffin is a very powerful m
14	DC 48	gently trying to remove the handkerchief she pressed to her	eyes]	, ' this is not only very ridiculous of you , but very wrong . In
15	DC 45	' said Mrs. Markleham , mechanically following her with her	eyes]	, ' to find a man at Doctor Strong 's time of life , with the stre
16	MC 40	d kindly . ' Which shows [, ' said Mrs Gamp , casting up her	eyes]	, ' what a little way you 've travelled into this wale of life , my
17	OCS 41	d . ' Oh Kit [! ' said his mother , with her handkerchief to her	eyes]	, ' what have you done ! I never can go there again -- never
18	LD 14	th all the earnestness of her soul looking steadily out of her	eyes]	, ' what I am going to ask you not to do ? '' I think I can .
19	DC 51	a gleam of light upon me , Trot [, ' said my aunt , drying her	eyes]	, ' why , it wo n't matter to him . I see the service in the Pray
20	OMF 59	es n't know anything about it [, ' with a sob , and wiping her	eyes]	images do not represent actual gameplay

A mathematical model of organising conc.

- Concordance reading = **analysis tree** consisting of **subset** nodes and **arrangement** nodes
 - subset nodes form the structure of the tree → focus on part of conc.
 - arrangement nodes = alternative views of the same subset (→ parent)
 - arrangement nodes are siblings, subset nodes can be children of either kind
 - root node = subset node corresponding to full concordance
- **Subset** node = Selecting algorithm with parameters
- **Arrangement** node = ≤ 1 Grouping algorithm with parameters + sequence of Ordering algorithms with parameters
 - each arrangement node completely overwrites any prior arrangement

Concordance view

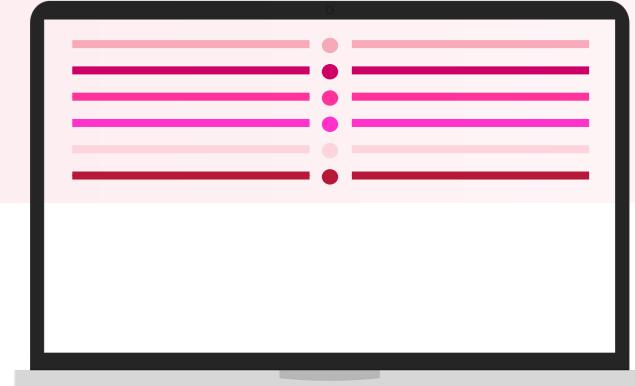
- Each node in the analysis tree represents a **concordance view**, i.e. an arrangement of a subset of the concordance
- Identifies **subset + ordering** of conc. lines via **line Nº** as unique ID
- With Grouping algorithm: list of **sets** of conc lines specified by line Nº
 - **Partitioning:** ordering of the sets (\neq ordering of lines)
 - **Grouping:** ordered tree of the sets + prototypical examples for each set
- Optional: supplementary information on concordance lines, sets, and relevant token spans returned by algorithms

Formalising algorithms

Application of an algorithm is conceptualised mathematically as annotation of concordance lines:

- Selecting = annotation of a **Boolean variable**
 - Sorting = annotation of an **integer variable** (surrogate keys)
 - Ordering = annotation of a **floating-point variable** (preference scores)
 - Partitioning = annotation of a **categorical variable** (set membership)
 - Clustering = annotation of **ordered tree** of subsets
- **concordance view** derived from annotations

Strategy 1: Selecting



Selecting = add **Boolean variable** to lines

- keep concordance line if value is True
- exclude selected lines by logical negation of variable (all algorithms)

Examples

- selection based on metadata categories or numerical ranges
- select random subset (reproducible, stratified, ...)
- KWIC filter (lines containing certain words, lemmas, POS tags, ...)
- manual selection of individual concordance lines

Strategy 2: Sorting [Ordering]



Sorting = add **integer variable** with sort keys

- pairwise comparison of lines ($A < B$, $A = B$, $A > B$)
- resulting sort order → integers as **surrogate keys** ($A < B$, $A = B$, $A > B$)
- ties ($A = B$) can be broken by additional **Sorting** or **Ranking** algorithms

Examples

- sort alphabetically by left or right context
- sort by POS tag of first (L1) or second (L2) token before node
- sort by numerical (e.g. year) or categorical (e.g. author) metadata
- random shuffling (reproducible)

Aside: Context trees & KWIC patterns



Fig 5: Alberto Gonzales' testimony in 2007.

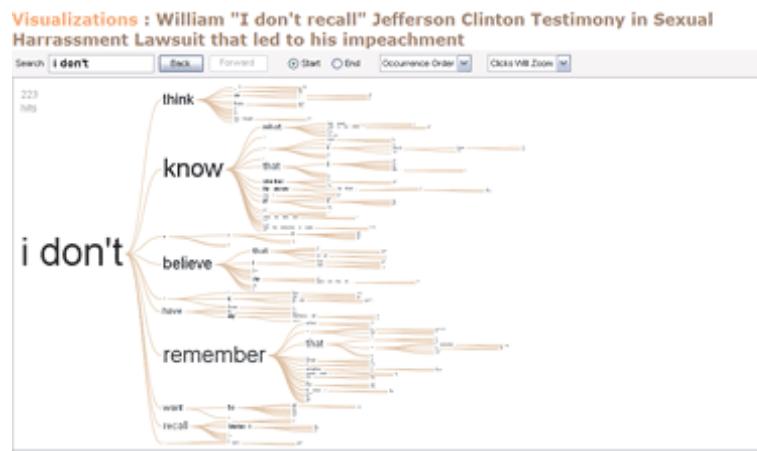
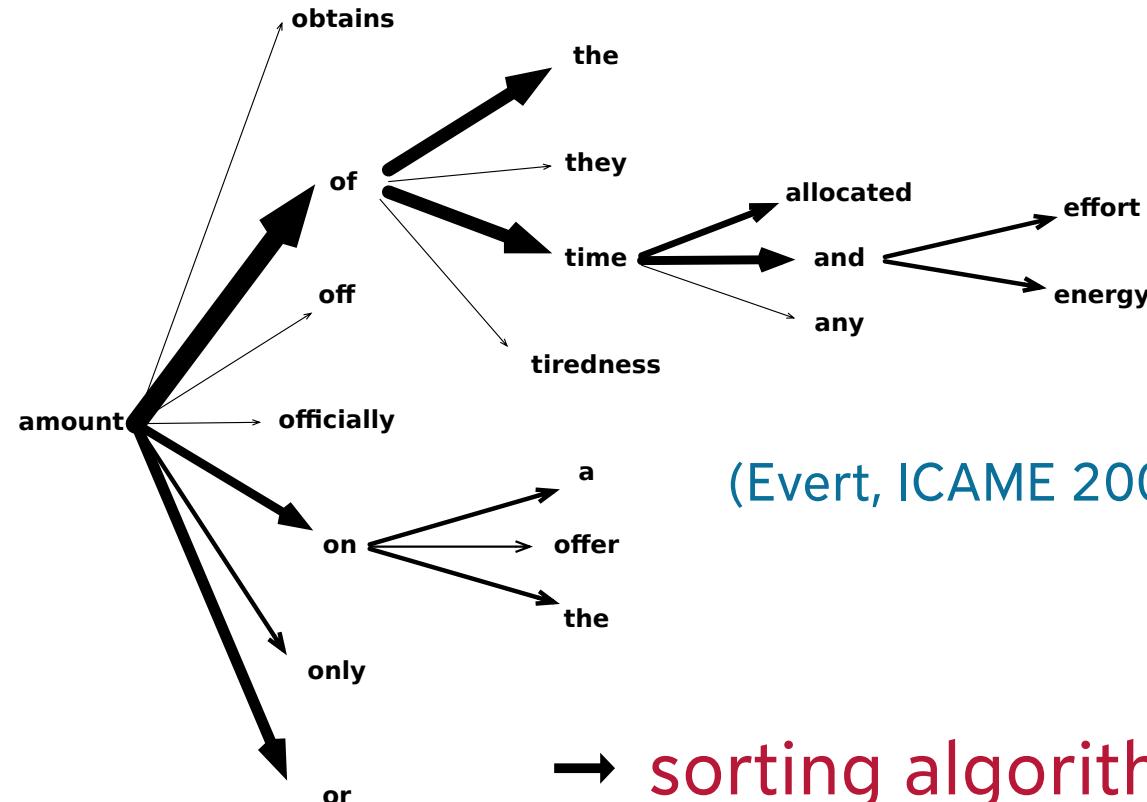


Fig 6: Bill Clinton's testimony in 1998.



(Evert, ICAME 2007)

The Word Tree
(Wattenberg & Viégas, 2008)

→ sorting algorithm for
concordance reading
(Anthony 2022)
... but 3 different versions

Strategy 3: Ranking [Ordering]



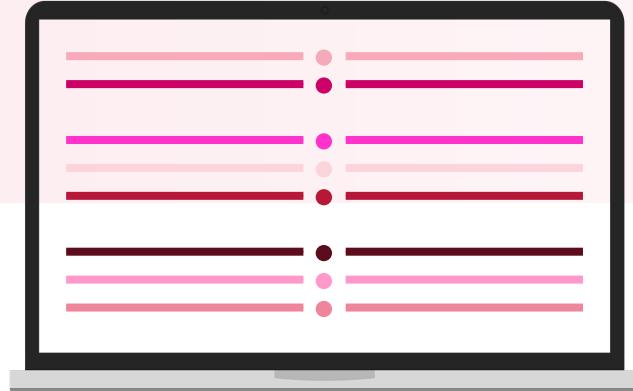
Ranking = add **floating-point variable** to lines

- values = preference score assigned to each line
- decreasing order: lines with highest scores shown at top
- ties can occur e.g. if scores happen to be integer values

Examples

- rank by readability, GDEX algorithm, or fit to selected CEFR level
- rank by frequency of the node string
- rank by similarity to query (for fuzzy search)
- rank by number of significant collocates of the node in context, or by number of user-specified keywords (KWIC grouper)

Strategy 4: Partitioning [Grouping]



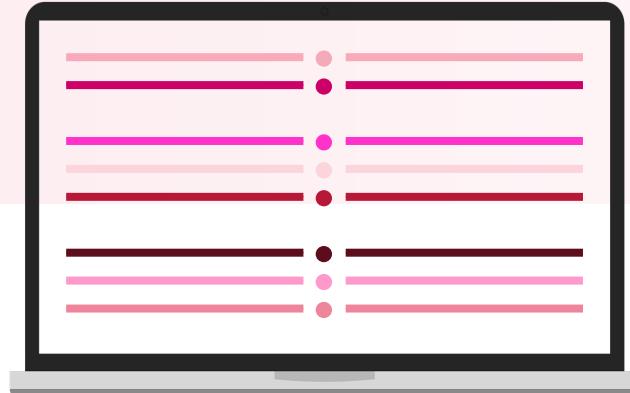
Partitioning = add **partition N°** to each line

- each line assigned to exactly one partition,
based on a property of the concordance line (not on comparisons)
- also provide ordered list of partitions with display labels, etc.

Examples

- frequency breakdown of node strings
- partition by POS tag of first (L1) or second (L2) token before node
- partition by categorical metadata (variety, genre, speaker info, ...)
- partition by lemma trigram R1+R2+R3 (similar to KWIC patterns)

Strategy 5: Clustering [Grouping]



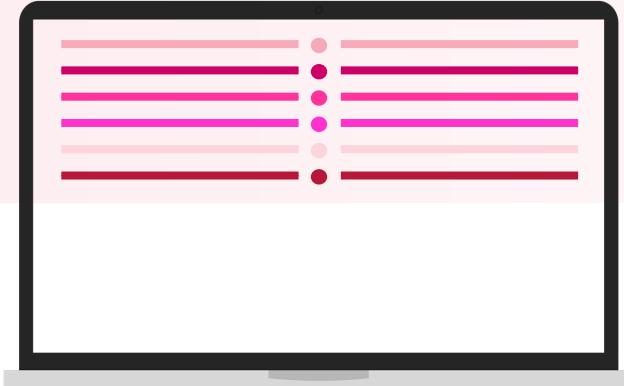
Clustering = add **ordered tree** over lines

- based on pairwise similarities of concordance lines
- hierarchical clustering → deep tree, flat clustering → single-level tree
- tree describes both nesting and preference order of clusters

Examples

- clustering based on lexical similarity (shared words), semantic similarity (sentence/word embeddings), or syntactic similarity
- clustering based on multiple metadata features → similarity score
- all clusterings: either flat or hierarchical, with different algorithms
- context tree (on POS tags, lemmas, semantic tags, ...)

Strategy 1': Manual Selecting



Selecting based on manual choice made by user

- also adds Boolean variable & can be inverted
- direct selection of lines vs. indirect (via set ID or supplementary information)

Examples

- manual validation of concordance lines (e.g. false positives)
- select sets by ID (after Grouping) or range of lines (after Ordering)
- threshold based on ranking scores (returned as supplementary info)
- “interactive” vs. “non-interactive” algorithms (e.g. top-N lines)

Research documentation

- Analysis tree as **research documentation**
 - concordance view uniquely determined by path from root node
 - bookmarked nodes = basis for interpretation & discussion
- Exact **reproduction** with identical concordance data
 - readers can reproduce published results completely
 - but also explore further concordance views
- **Save / load** analysis tree → continue concordance reading later
- Analysis tree as **template** for concordance organisation
 - “replay” tree on a new concordance (possibly from different corpus)
 - interactive manual selection has to be omitted (→ not meaningful)

Time for a break ...

Coffee



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