



Friedrich-Alexander-Universität
Philosophische Fakultät und
Fachbereich Theologie



UNIVERSITY OF
BIRMINGHAM



Deutsche
Forschungsgemeinschaft



Arts and
Humanities
Research Council

living in some squalor; the other exhibitions were **IN** houses, old shops, small factory spaces, offices and
might be described as 'wet' or 'dry' (W or D) and **IN** a humid temperate climate such as Britain experienced
the powerful message put across by the curriculum **IN** most schools is that knowledge can be divided into
not like the trouble we had half an hour ago, when **IN** fact there were three lines, sections of which there
opportunities for oral **READING** arise naturally **IN** the course of the day; for instance, in the activity of
traditional hand-made **CONCORDANCES** **IN** several ways. One is that they will be much more
ached 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
who felt it necessary to take aside both captains **IN** the **21ST** minute and warn them about each team
information has undergone several media revolutions **IN** the last **CENTURY**. In principle, now that opera
to some extent the ownership of the biggest hits **IN** each year), the aggregate market share of the five
focus from arts education in general, to one area **IN** particular, namely English lessons and the fictional
f the horse was, shall I say dreamed up, erm and **IN** fact we had one or two horses, Clydesdale horses
faded woods. It was merely that he never wanted **IN** a tournament round to risk anything which might u

1

Reading concordances with algorithms

CL 2025 Workshop | 29 June 2025

Reading Concordances in the 21st Century (RC21) project team

Nathan Dykes • Stephanie Evert • Michaela Mahlberg • Alexander Piperski

Workshop overview

- I. Concordance reading
- II. Strategies for organising concordances
- III. Hands-on: traditional concordancers

- IV. Reading concordances with algorithms
- V. Hands-on: FlexiConc
- VI. Summary / outlook: Jupyter notebooks

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 believ
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
hellip; 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, blase, 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 l
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

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 believ
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
hellip; 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, blase, 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 l
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

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.*

ADJ-GRADED:
v-link ADJ,
oft ADJ of n.
ADJ to-inf
= frightened

[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.*

ADJ-GRADED:
v-link ADJ,
usu ADJ for n

[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

Theoretical background

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)

Patterns of *afraid*

v-link ADJ *of*

I was afraid of the other boys.

v-link ADJ *for*

She's afraid for her family in Somalia.

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.*

◆◆◆◆◆
ADJ-GRADED:
v-link ADJ,
oft ADJ of n,
ADJ to-inf
= frightened

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.*

ADJ-GRADED:
v-link ADJ,
usu ADJ for n

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

Controversy patterns in text-initial sentences 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	<i>fresh</i>	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	the	naked	eye	, and so they much preferred the	-
<	Binaries that can be seen with	the	naked	eye	(very few of these) or through	>
<	our galaxy that you can see with	the	naked	eye	Now to expand our horizons: The	-
<	is like viewing the moon with	the	naked	eye	. You see a disk with some	>
<	of thing you could look at with	the	naked	eye	<t> <CQ1> Would you like to	>
<	it is not really visible to	the	naked	eye	. <t> About five years ago, a	>
<	cannot always be perceived by	the	naked	eye	and said, <CQ1> As I've gotten	>
<	even though nothing is visible to	the	naked	eye	. We should trust our patients	>
<	the opening is not visible to	the	naked	eye	. Typically, the closed	>
<	photoaging changes are visible to	the	naked	eye	.<t> And even more disturbing	>
<	little rooftop house. Viewed with	the	naked	eye	, she was nothing more than a	>
<	is <FCH> visible <FCH> with	the	naked	eye	.<t> While stroke path can be	>
<	outlets. These could be seen with	the	naked	eye	from a helicopter, and the water	-
<	human ovum is barely visible to	the	naked	eye	. The corpus luteum forms in the	-
<	small. it can easily be seen by	the	naked	eye	.<t> The time of ovulation in	>
<	is large enough to be seen by	the	naked	eye	. The ovary still contains the	>
<	the surveyor's map. Invisible to	the	naked	eye	beneath a shroud of poison ivy,	-
<	to iris border. Invisible to	the	naked	eye	, the young borers work their	>
<	plants that you can see with	the	naked	eye	just as much as those for which	>
<	is almost invisible to	the	naked	eye	. For. as his newly curvaceous	>
<	by many besides those visible to	the	naked	eye	\ People from varied stations	>
<	which Parsons could not see with	the	naked	eye	Łwith Parsons' only	>
<	a strip of water so wide	the	naked	eye	can barely see the far shore #	>
<	passage among them, visible to	the	naked	eye	. Time to settle down for a	>
<	muted one could look at it with	the	naked	eye	. The air smelled of summer's	>
<	like a wiggling speck of dust to	the	naked	eye	, like nothing more than dining	>
<	from the deck of his ship with	the	naked	eye	, these are very faint aren't	>
<	becomes immediately apparent to	the	naked	eye	. The opening of each envelope is	-
<	is the first supernova seen with	the	naked	eye	for nearly 400 years # The last	-
<	was the first to be seen with	the	naked	eye	for 400 years and is relatively	-
<	was the first to be seen with	the	naked	eye	for 400 years and is relatively	-
<	and sewage clearly visible to	the	naked	eye	. And the sewage is not only bad	-
<	to earth to be visible with	the	naked	eye	. That was almost four years	>
<	bright comet which was visible to	the	naked	eye	and passed extremely close to	>
<	than the faintest star visible to	the	naked	eye	on a dark night. The fourth	>
<	bright comet which was visible to	the	naked	eye	and passed extremely close 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, 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, you of our inability to mask our true feelings was unearthed by John leaves little doubt as to his true feelings. And as for Li X calm and composed, masking her true feelings. So her demeanour with accounts, has now conveyed his true feelings. We await the outcome as a cloak to disguise their true feelings. Deborah Bruce's perspective we watched her. No doubt her true feelings were emerging from what he may prefer to let his true feelings out in print. Today that - even if those were his true feelings. Instead he did something 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, the 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- versus Kent last week let slip her true feelings about royal lineage 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 people Chilean cities to express their true feelings about this fateful

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, you
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
accounts, has now conveyed **his** true feelings. We await the outcome
as a cloak to disguise **their** true feelings. Deborah Bruce's poems
we 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 something
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, the
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- versus
Kent last week let slip **her** true feelings about royal life
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 people
Chilean cities to express **their** true feelings about this fateful

colligation

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, you
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
accounts, has now **conveyed his** true feelings. We await the outcome
as a cloak to disguise **their** true feelings. Deborah Bruce's poems
we 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
moist-eyed, and **makes known her** true feelings, what does Par
get a hint of Do Thi's true feelings but Caine and
of being able to hide **her** true feelings. In public life they
to invade Iraq. Whatever **his** true feelings about the war, the
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 li
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 p
Chilean cities to **express their** true feelings about this fateful

colligation

semantic
preference

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, you
of our **inability to mask our** true feelings was unearthed by John
leaves little doubt as to **his** true feelings. And as for Li X
calm and composed, **masking her** true feelings. So
accounts, has now **conveyed his** true feelings. We await the outcome
as a cloak to disguise **their** true feelings. Deborah Bruce's poems
we 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
moist-eyed, and **makes known her** true feelings, what does Par
get a hint of Do Thi's true feelings but Caine and
of being able to hide **her** true feelings. In public life they
to invade Iraq. Whatever **his** true feelings about the war, the
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
Kent last week **let slip her** true feelings about
tune she marries him, but **her** true feelings are even
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 people
Chilean cities to **express their** true feelings about this fateful

colligation

semantic
preference

semantic
prosody

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

12 sers rejoice: a French ruling means cheaper **coffee** capsules will soon be on the shelves.

13 News Starbucks Chestnut Praline Latte: **Coffee** chain launches first new holiday drink

14 lf Home» Men» Active» Men's Health Too much **coffee** damages fertility for men A chocolate

15 travel all sections close Drugs Drinking **coffee** doesn't make you more alert,

16 network Previous | Next | Index Zimbabwe's **coffee** farmers struggle amid global boom and

17 ner zone What could help make the future of **coffee** farmers more sustainable? Fairtrade

18 change adaptation takes root in Peruvian **coffee** farms With the support of Lidl and

19 t of nerve Should you swap the milk in your **coffee** for a knob of butter? The 'fat white' is

20 ink» Food and Drink Advice Five of the best **coffee** gadgets If you've taken the bold leap to

21 e» News» Science» Space 'ISSpresso' space **coffee** machine to be delivered to International

22 IndyBest > House & Garden 11 best capsule **coffee** machines Become a connoisseur with our

23 hael Gove IndyBest > House & Garden 10 best **coffee** machines From velvety lattes to espresso

24 D Offers Jobs Comment is free Why drinking **coffee** makes women full of beans Women who

25 News NHS staff banned from drinking tea or **coffee** on the job because it looks like they're

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
12 sers rejoice: a French ruling means cheaper **coffee** capsules will soon be on the shelves.
13 News Starbucks Chestnut Praline Latte: **Coffee** chain launches first new holiday drink
14 lf Home» Men» Active» Men's Health Too much **coffee** damages fertility for men A chocolate
15 travel all sections close Drugs Drinking **coffee** doesn't make you more alert,
16 network Previous | Next | Index Zimbabwe's **coffee** **farmers** struggle amid global boom and
17 ner zone What could help make the future of **coffee** **farmers** more sustainable? Fairtrade
18 change adaptation takes root in Peruvian **coffee** **farms** With the support of Lidl and
19 t of nerve Should you swap the milk in your **coffee** for a knob of butter? The 'fat white' is
20 ink» Food and Drink Advice Five of the best **coffee** gadgets If you've taken the bold leap to
21 e» News» Science» Space 'ISSpresso' space **coffee** **machine** to be delivered to International
22 IndyBest > House & Garden 11 best capsule **coffee** **machines** Become a connoisseur with our
23 hael Gove IndyBest > House & Garden 10 best **coffee** **machines** From velvety lattes to espresso
24 D Offers Jobs Comment is free Why drinking **coffee** makes women full of beans Women who
25 News NHS staff banned from drinking tea or **coffee** on the job because it looks like they're

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
12 sers rejoice: a French ruling means cheaper **coffee** capsules will soon be on the shelves.
13 News Starbucks Chestnut Praline Latte: **Coffee** chain launches first new holiday drink
14 lf Home» Men» Active» Men's Health **Too much coffee** damages fertility for men A chocolate
15 travel all sections close Drugs Drinking **coffee** doesn't make you more alert,
16 network Previous | Next | Index Zimbabwe's **coffee farmers** struggle amid global boom and
17 ner zone What could help make the future of **coffee farmers** more sustainable? Fairtrade
18 change adaptation takes root in Peruvian **coffee farms** With the support of Lidl and
19 t of nerve Should you swap the milk in your **coffee** for a knob of butter? The 'fat white' is
20 ink» Food and Drink Advice Five of the best **coffee** gadgets If you've taken the bold leap to
21 e» News» Science» Space 'ISSpresso' space **coffee machine** to be delivered to International
22 IndyBest > House & Garden 11 best capsule **coffee machines** Become a connoisseur with our
23 hael Gove IndyBest > House & Garden 10 best **coffee machines** From velvety lattes to espresso
24 D Offers Jobs Comment is free Why drinking **coffee** makes women full of beans Women who
25 News NHS staff banned from drinking tea or **coffee** on the job because it looks like they're

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
12 sers rejoice: a French ruling means cheaper **coffee** capsules will soon be on the shelves.
13 News Starbucks Chestnut Praline Latte: **Coffee** chain launches first new holiday drink
14 lf Home» Men» Active» Men's Health **Too much** **coffee** damages fertility for men A chocolate
15 travel all sections close Drugs **Drinking** **coffee** doesn't make you more alert,
16 network Previous | Next | Index Zimbabwe's **coffee** **farmers** struggle amid global boom and
17 ner zone What could help make the future of **coffee** **farmers** more sustainable? Fairtrade
18 change adaptation takes root in Peruvian **coffee** **farms** With the support of Lidl and
19 t of nerve Should you swap the milk in your **coffee** for a knob of butter? The 'fat white' is
20 ink» Food and Drink Advice Five of the best **coffee** gadgets If you've taken the bold leap to
21 e» News» Science» Space 'ISSpresso' space **coffee** **machine** to be delivered to International
22 IndyBest > House & Garden 11 best capsule **coffee** **machines** Become a connoisseur with our
23 hael Gove IndyBest > House & Garden 10 best **coffee** **machines** From velvety lattes to espresso
24 D Offers Jobs Comment is free Why **drinking** **coffee** makes women full of beans Women who
25 News NHS staff banned from **drinking** tea or **coffee** on the job because it looks like they're

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
12 sers rejoice: a French ruling means cheaper **coffee** capsules will soon be on the shelves.
13 News Starbucks Chestnut Praline Latte: **Coffee** chain launches first new holiday drink
14 lf Home» Men» Active» Men's **Health** **Too much** **coffee** damages fertility for men A chocolate
15 travel all sections close Drugs **Drinking** **coffee** doesn't make you more alert,
16 network Previous | Next | Index Zimbabwe's **coffee** **farmers** struggle amid global boom and
17 ner zone What could help make the future of **coffee** **farmers** more sustainable? Fairtrade
18 change adaptation takes root in Peruvian **coffee** **farms** With the support of Lidl and
19 t of nerve Should you swap the milk in your **coffee** for a knob of butter? The 'fat white' is
20 ink» Food and Drink Advice Five of the best **coffee** gadgets If you've taken the bold leap to
21 e» News» Science» Space 'ISSpresso' space **coffee** **machine** to be delivered to International
22 IndyBest > House & Garden 11 best capsule **coffee** **machines** Become a connoisseur with our
23 hael Gove IndyBest > House & Garden 10 best **coffee** **machines** From velvety lattes to espresso
24 D Offers Jobs Comment is free Why **drinking** **coffee** makes women full of beans Women who
25 News NHS staff banned from **drinking** tea or **coffee** on the job because it looks like they're

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

12 sers rejoice: a French ruling means cheaper **coffee** capsules will soon be on the shelves.

13 News Starbucks Chestnut Praline Latte: **Coffee** chain launches first new holiday drink

14 lf Home» Men» Active» Men's **Health** **Too much** **coffee** **damages fertility for men** A chocolate

15 travel all sections close Drugs **Drinking** **coffee** **doesn't make you more alert**,

16 network Previous | Next | Index Zimbabwe's **coffee** **farmers** struggle amid global boom and

17 ner zone What could help make the future of **coffee** **farmers** more sustainable? Fairtrade

18 change adaptation takes root in Peruvian **coffee** **farms** With the support of Lidl and

19 t of nerve Should you swap the milk in your **coffee** for a knob of butter? The 'fat white' is

20 ink» Food and Drink Advice Five of the best **coffee** gadgets If you've taken the bold leap to

21 e» News» Science» Space 'ISSpresso' space **coffee** **machine** to be delivered to International

22 IndyBest > House & Garden 11 best capsule **coffee** **machines** Become a connoisseur with our

23 hael Gove IndyBest > House & Garden 10 best **coffee** **machines** From velvety lattes to espresso

24 D Offers Jobs Comment is free Why **drinking** **coffee** makes women full of beans Women who

25 News NHS staff banned from **drinking** tea or **coffee** on the job because it looks like they're

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. Comir
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 Co
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?
- Activity: concordance analysis of body parts in 19th century fiction

A corpus 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?

#LancsBox X 5.0.3

her cheeks

chilit whole corpus 4M

Q her cheeks Hits: 74 (16,69) Texts: 1/1

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 whole corpus 4M

her cheeks

4M Right 1-5 contains "red"

Hits: 74 (16,69)

9 (2,03)

Texts: 1/1

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

whole corpus

4M

her cheeks

Hits: 74 (16,69)

Texts: 1/1

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	eyelashes 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*

clic-fiction.com

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	ning 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,	Antoni	
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 telli	vanity	
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

Target Corpus

Name: ChiLit

Files: 71

Tokens: 4424305

alice.txt

alone.txt

amulet.txt

beauty.txt

brass.txt

bunny.txt

canada.txt

carved.txt

clive.txt

coral.txt

crofton.txt

cuckoo.txt

daisy.txt

dominics.txt

dove.txt

dragons.txt

dreamdays.txt

duke.txt

eric.txt

fiord.txt

five.txt

flopsy.txt

forest.txt

girls.txt

glass.txt

goldenage.txt

holiday.txt

howwhy.txt

AntConc

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	quatermai	antible nod, she indicated approval. All the while Agon's	eyes	were fixed upon the altar before him apparently in

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)
- Challenges: no systematic standards for describing methodology, mix of tool and method, where is the “starting point”?

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)**

This concordance was then edited in order to **filter out** cases where the first word to the right (the R1 collocate) of the italicised adjective is unlikely to be directly related to the adjective of interest:... **(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)**

The concordance has been slightly pre-edited by using the facility in MICROCONCORD for **sorting** citations; in this case separating the nouns from the verbs. **(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 (a CADS example)

... most CL methods require considerable **human input**, which often includes qualitative analysis (such as examining concordance lines)

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

Hands-on: traditional concordancing

Activity

- Analyse concordances for body part nouns in 19th c. fiction
- Identify and interpret salient recurrent patterns
- Some body parts:
brain, breast, brow, cheek, cheeks, ear, ears, eye, eyes, faces, fingers, forehead, foot, mouth, neck, shoulder, tongue

Corpora

- **ChiLit**: Children's Literature from the 19th century
 - 71 novels, 4.4M words
- **19C**: reference corpus of English 19th century literature
 - 29 novels, 4.5M words
- **DNov**: collection of novels written by Charles Dickens
 - 15 novels, 3.8M words

Hands-on: traditional concordancing

Concordancer

- CQPweb server @ FAU:
<https://corpora.linguistik.uni-erlangen.de/cqpweb/>
- Login: **student1** ... **student15** | password: ●●●●●●●●
- Or **use your own favourite tool** (AntConc, Sketch Engine, #LancsBox X, WordSmith, Corpus Explorer, ...)
- ChiLit corpus available in plain-text format from workshop site <https://go.fau.de/1c-af>



Hands-on: traditional concordancing

Feedback

- Which salient patterns could you identify?
Do they have a clear interpretation?
- Which strategies for organising concordances did you use?
Did they prove helpful?
- Which concordancer software did you work with?
Did you encounter technical limitations in your analysis?

References

- Hunston, S. & Francis, G. (2000). *A corpus-driven approach to the lexical grammar of English*. Number 4 in Studies in Corpus Linguistics. John Benjamins, Amsterdam.
- Luhn, H. P. (1960). Keyword-in-context index for technical literature (kwic index). *American Documentation*, 11(4):288–295.
- Mahlberg, M. & O'Donnell, M. B. (2008). A fresh view of the structure of hard news stories. In *Proceedings of the 19th European Systemic Functional Linguistics Conference and Workshop*, Saarbrücken, Germany.
- Sinclair, J. M. (1998). The lexical item. In Weigand, E., editor, *Contrastive Lexical Semantics*, volume 171 of Current Issues in Linguistic Theory. John Benjamins.
- Sinclair, J. (2003). *Reading Concordances*. Pearson Education, Harlow.