

Learner Corpora and Phraseology

Phil Durrant







Two challenges in learner corpus research

- Challenge of quantification
- Challenge of interpretation

The challenge of quantification

Summarizing collocation use with numbers

Dear Sir,

I am writing to inform you on my opinion about the scheme set up by the Direct Trust. In the article the seven pupils were described as "tearaways", "noisy" and "disruptive". I disagree.

Yes, although the trip is unfair to the students in England who have to continue their school work, would the trip not change their perspective on education? It is rightly stated that children in Jamaica value their education even though they are impoverished. This will enable the "tearaways" to see what opportunities are offered in the UK and because this isn't a holiday, they will be forced to see they are wasting an opportunity. They are continuing their studies in Jamaica, which further supports Person_name's statement. As well as this, the trip will provide valuable experience which helps in getting these misunderstood teenagers to respect their authority.

Moreover, the article portrays the charity in a negative light. These children are likely to need support and advice, which is what the Direct Trust offers. Surely we can't deny teenagers that right? This isn't coming from tax payers' money either, it is entirely fund-raised. These trips are what the money is used for. As is rightly stated, these pupils are close to exclusion; the Divert Trust works to get these pupils back into education. It is well understood, these students are misunderstood, which leads to them needing attention that they may not receive from their families.

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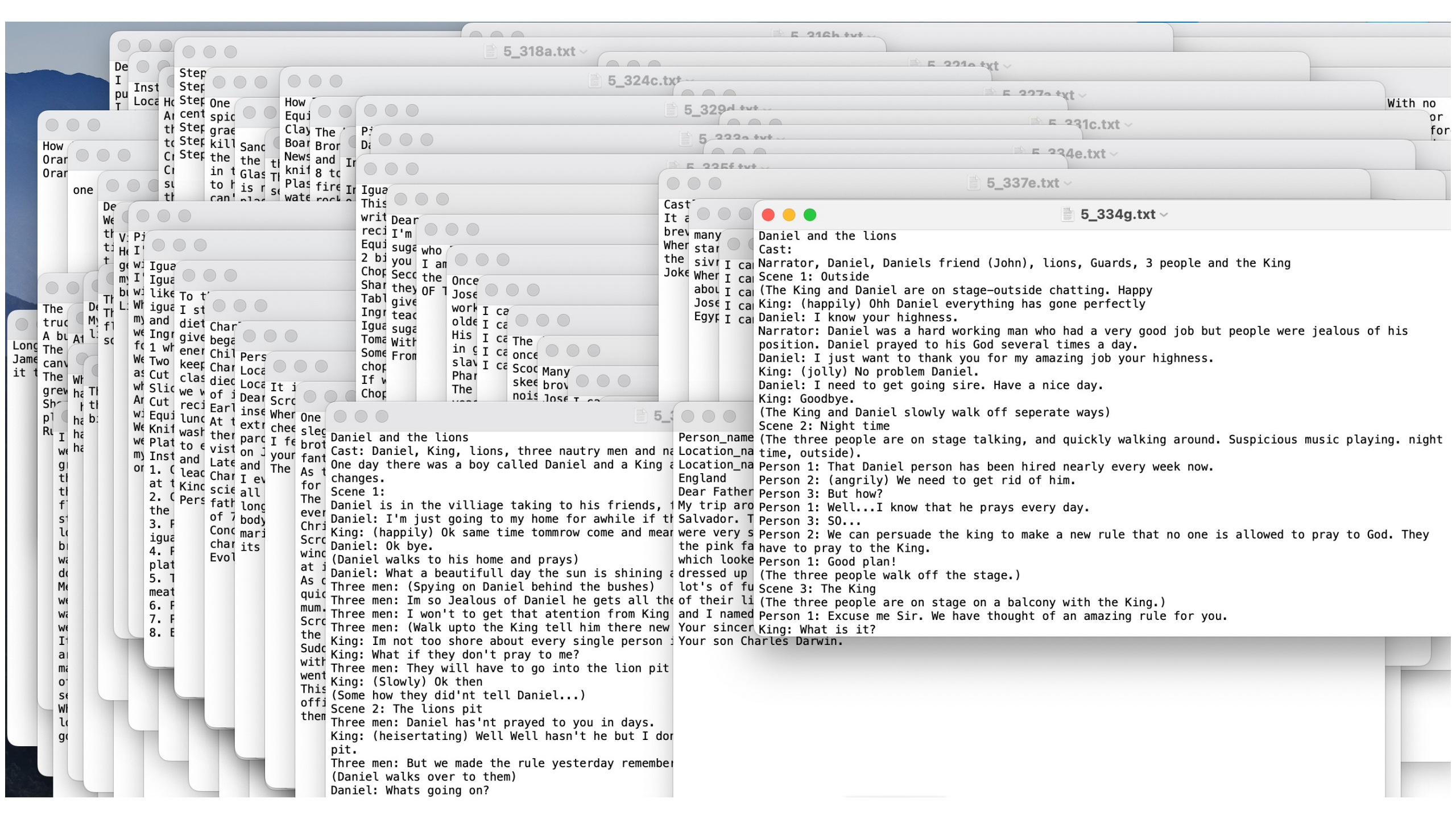
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Daniel and the lions
Cast: Daniel, King, lions, three nautry men and na
One day there was a boy called Daniel and a King a
changes.
Scene 1:
Daniel is in the villiage taking to his friends, 1
Daniel: I'm just going to my home for awhile if th
King: (happily) Ok same time tommrow come and near
Daniel: Ok bye.
(Daniel walks to his home and prays)
Daniel: What a beautifull day the sun is shining a
Three men: (Spying on Daniel behind the bushes)
Three men: Im so Jealous of Daniel he gets all the
Three men: I won't to get that attention from King
Three men: (Walk upto the King tell him there new
King: Im not too shore about every single person
King: What if they don't pray to me?
Three men: They will have to go into the lion pit
King: (Slowly) Ok then
(Some how they did'nt tell Daniel...)
Scene 2: The lions pit
Three men: Daniel has'nt prayed to you in days.
King: (heisertating) Well Well hasn't he but I dor
pit.
Three men: But we made the rule yesterday remember
(Daniel walks over to them)
Daniel: Whats going on?

Person_name
Location_na
Location_na
England
Dear Father
My trip aro
Salvador. T
were very s
the pink fa
which looke
dressed up
lot's of fu
of their li
and I named
Your sincer
Your son Charles Darwin.

Daniel and the lions
Cast:
Narrator, Daniel, Daniels friend (John), lions, Guards, 3 people and the King
Scene 1: Outside
(The King and Daniel are on stage-outside chatting. Happy
King: (happily) Ohh Daniel everything has gone perfectly
Daniel: I know your highness.
Narrator: Daniel was a hard working man who had a very good job but people were jealous of his
position. Daniel prayed to his God several times a day.
Daniel: I just want to thank you for my amazing job your highness.
King: (jolly) No problem Daniel.
Daniel: I need to get going sire. Have a nice day.
King: Goodbye.
(The King and Daniel slowly walk off seperate ways)
Scene 2: Night time
(The three people are on stage talking, and quickly walking around. Suspicious music playing. night
time, outside).
Person 1: That Daniel person has been hired nearly every week now.
Person 2: (angrily) We need to get rid of him.
Person 3: But how?
Person 1: Well...I know that he prays every day.
Person 3: SO...
Person 2: We can persuade the king to make a new rule that no one is allowed to pray to God. They
have to pray to the King.
Person 1: Good plan!
(The three people walk off the stage.)
Scene 3: The King
(The three people are on stage on a balcony with the King.)
Person 1: Excuse me Sir. We have thought of an amazing rule for you.
King: What is it?
Person 1: No more praying to God. Only to the King.
Person 2: Yes, that's a good idea.
Person 3: I agree.
King: (jolly) No problem Daniel.
Daniel: I need to get going sire. Have a nice day.
King: Goodbye.
(The King and Daniel slowly walk off seperate ways)



5_318a.txt

5_216h.txt

5_221e.txt

5_227a.txt

5_231c.txt

5_234e.txt

5_337e.txt

5_334g.txt

With no

or

for

John), lions, Guards, 3 people and the King

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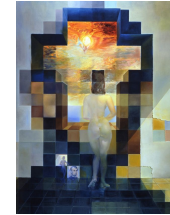
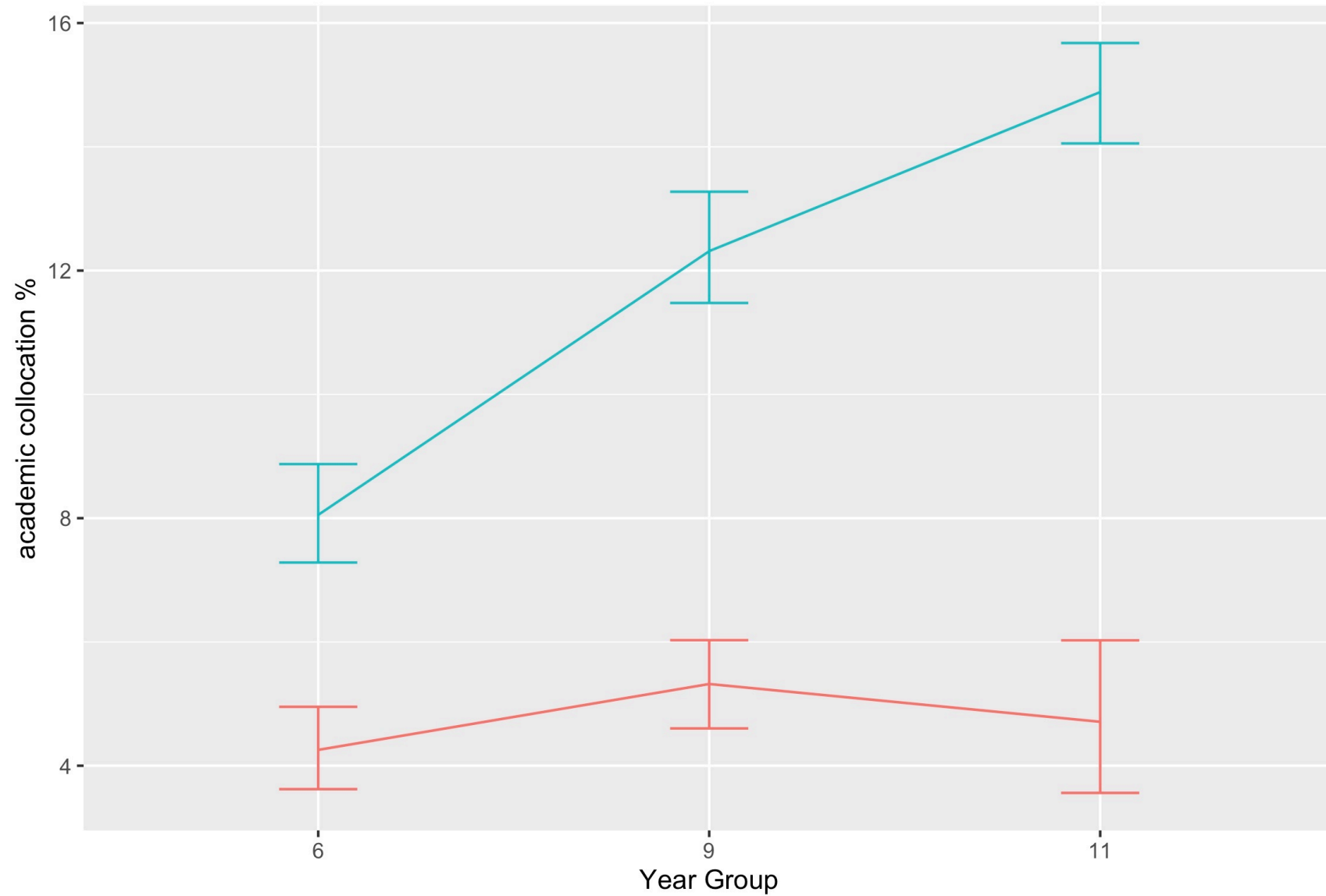
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genre

- literary
- non_literary

Based on subset of GiG corpus
(Durrant & Brenchley 2021).

- 732 x Year 6 texts;
- 664 x Year 9 texts;
- 515 x Year 11 texts

Summarizing collocation use with numbers

What we're trying to do...

- Simplify our data so that we can see broader patterns
- Without distorting the picture

The problem of interpretation

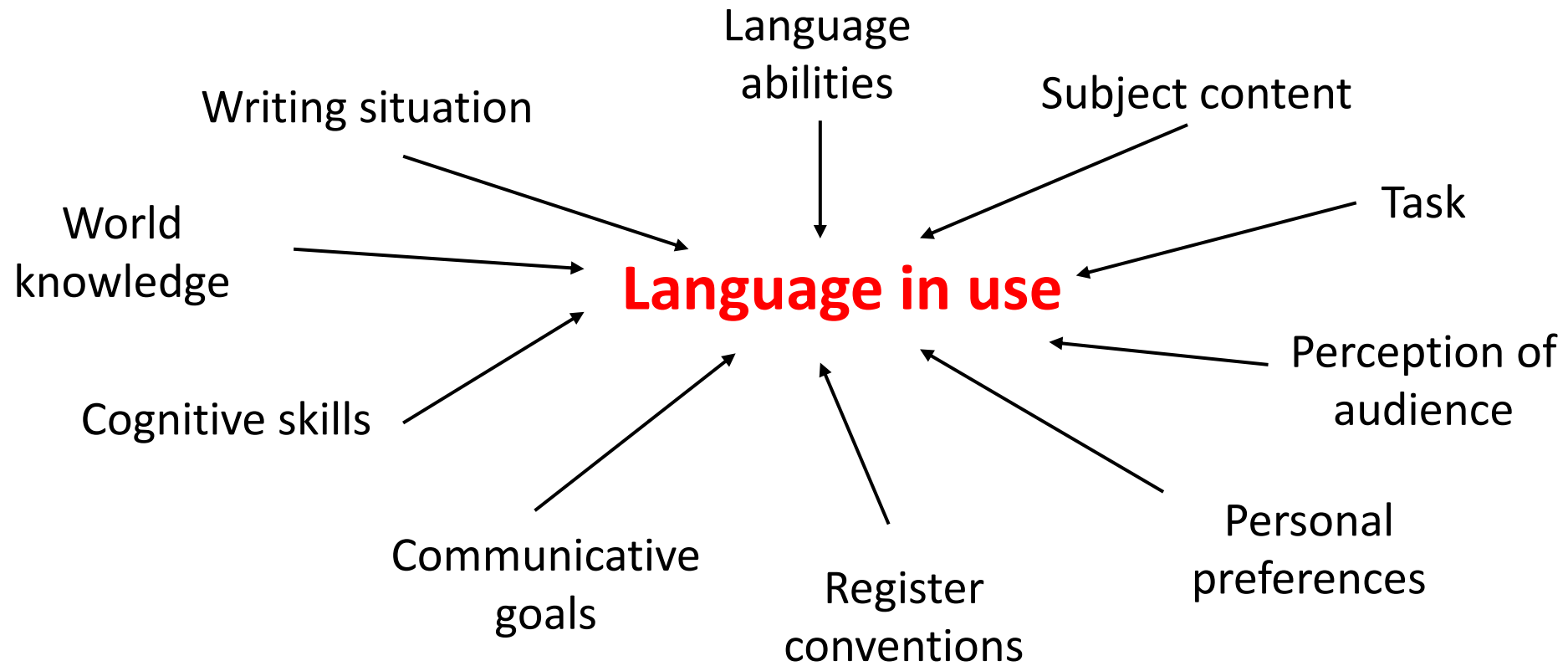
Figuring out what the numbers mean

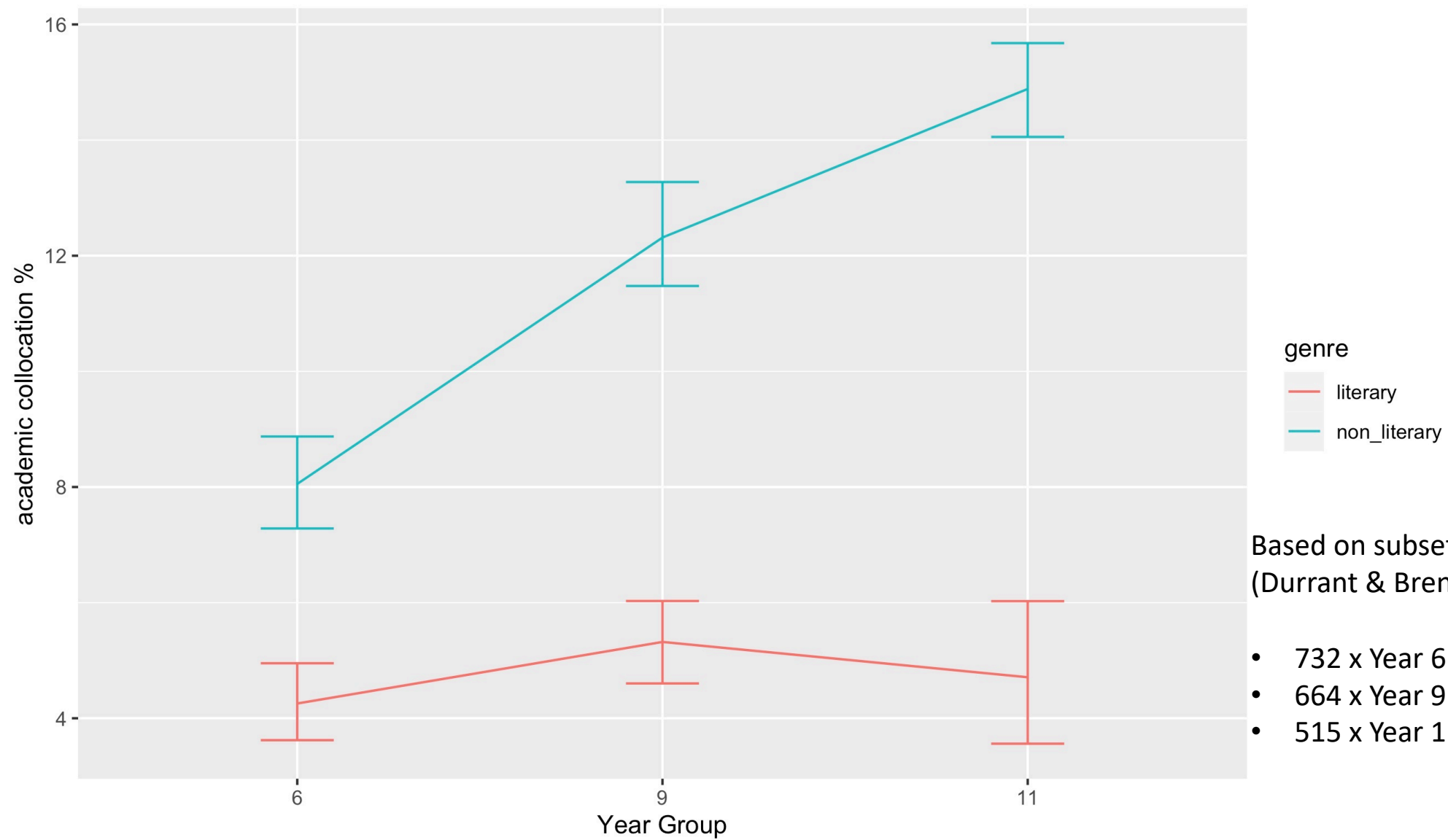
Language in use

Language
abilities



Language in use





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An example...

Adjective – Noun combinations in L1 school writing

A frequently used approach to quantification

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	A	B
1	w1	w2
2	valuable__jj	experience__nn
3	negative__jj	light__nn
4	fantastic__jj	opportunity__nn
5	small__jj	amount__nn
6	brighter__jj	future__nn
7		
8		

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numbers from BAWE

	A	B	C	D	E	F
1	w1	w2	c_freq	w1_freq	w2_freq	MI
2	valuable__jj	experience__nn	2	316	2413	4.19616526
3	negative__jj	light__nn	7	1626	1190	4.66005573
4	fantastic__jj	opportunity__nn	2	39	1365	8.03647076
5	small__jj	amount__nn	109	2511	2359	7.00673652
6	brighter__jj	future__nn	3	9	975	11.2223373
7						

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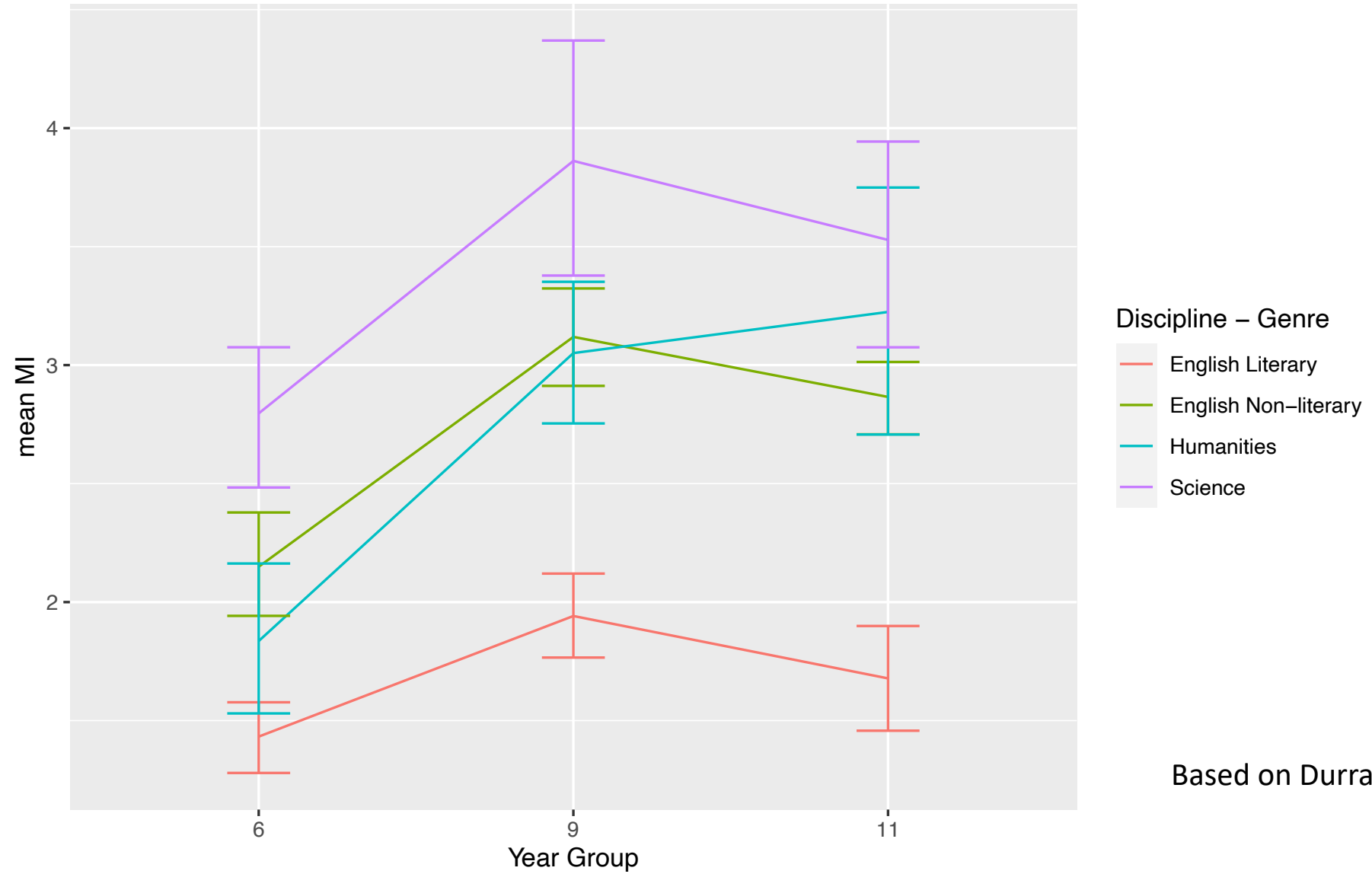
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4	fantastic__jj	opportunity__nn
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7		



mean MI = 7.02

	A	B	C	D	E	F
1	w1	w2	c_freq	w1_freq	w2_freq	MI
2	valuable__jj	experience__nn	2	316	2413	4.19616526
3	negative__jj	light__nn	7	1626	1190	4.66005573
4	fantastic__jj	opportunity__nn	2	39	1365	8.03647076
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7						

	A	B	C	D	E
1	file_names	year_group	discipline	genre	mean_Ml
2	1_1	11	english	non_literary	7.108826889
3	1_2	11	english	non_literary	7.024353116
4	1_3	11	english	non_literary	4.027946785
5	1_4	11	english	non_literary	5.342293113
6	1_5	11	english	non_literary	4.816651842
7	10_529	9	english	literary	7.057898207
8	10_531	9	english	literary	6.892575688
9	10_532	9	english	literary	6.127655821
10	10_533	9	english	literary	4.004099044
11	10_534	9	english	literary	9.454590348
12	10_535	9	english	literary	5.430912657



Based on Durrant & Brenchley
(2021).

The problem of low-frequency items

combination	combination freq	word 1 freq	word 2 freq	MI
chalmerian zombie	1	1	1	22.74
flamboyant rambling	1	1	1	22.74
padded dashboard	2	3	9	18.98
itinerant kidnapper	3	5	5	19.68

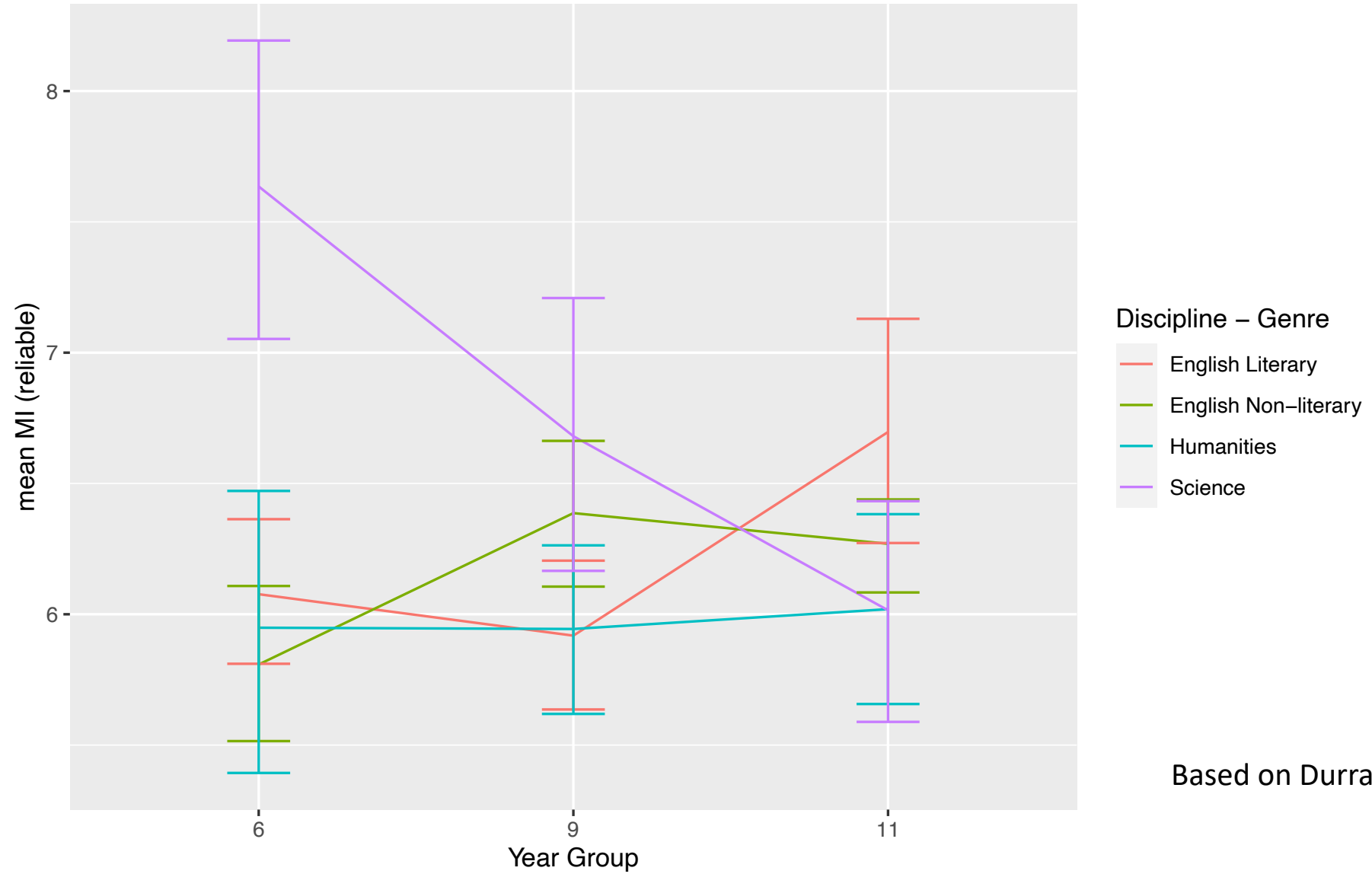
Excluding low-frequency items

	A	B	C	D	E	F	
1	w1	w2	c_freq	w1_freq	w2_freq	MI	
2	valuable__jj	experience__nn	2	316	2413	4.19616526	
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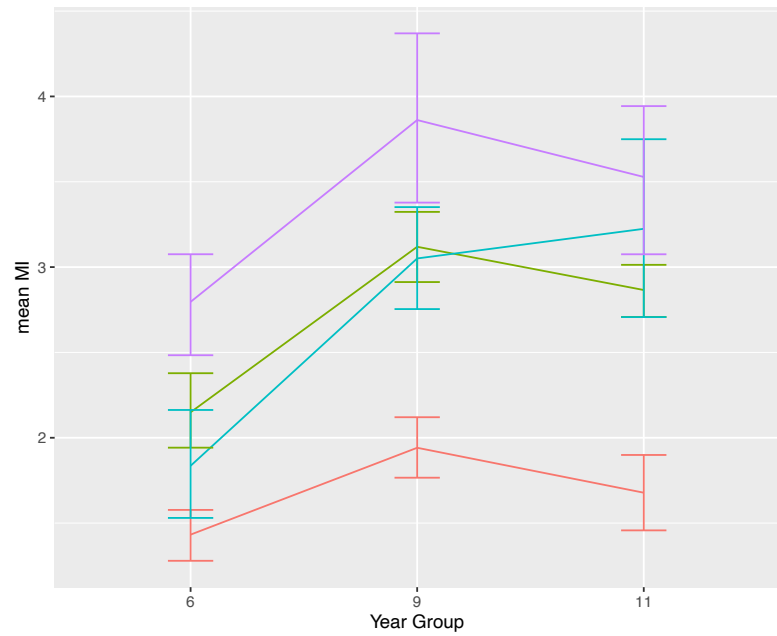
Excluding low-frequency items

mean MI = 5.83

	A	B	C	D	E	F
1	w1	w2	c_freq	w1_freq	w2_freq	MI
2	valuable__jj	experience__nn	2	316	2413	4.19616526
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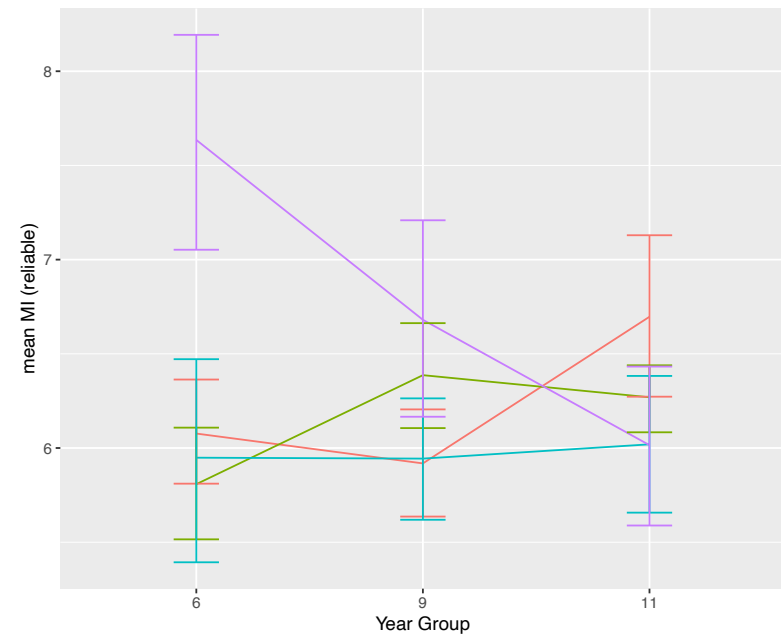


Based on Durrant & Brenchley
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Discipline – Genre

- English Literary
- English Non-literary
- Humanities
- Science



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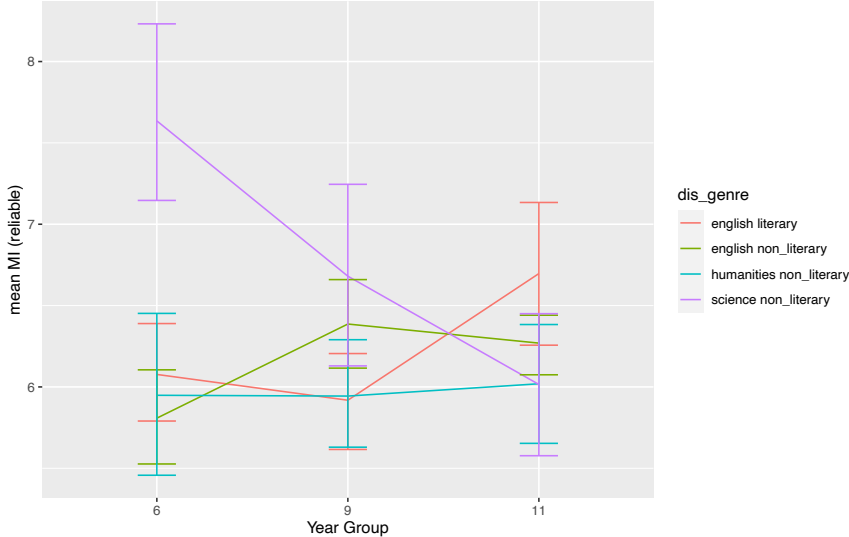
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E		F							
req	MI								
2413	4.19616526								
1190	4.66005573								
1365	8.03647076	1	file_names	year_group	discipline	genre	reliable_MI		
2359	7.00673652	2	1_1	11	english	non_literary	6.98439359		
975	11.2223373	3	1_2	11	english	non_literary	5.83339613		
		4	1_3	11	english	non_literary	4.29908268		
		5	1_4	11	english	non_literary	6.06919011		
		6	1_5	11	english	non_literary	5.27225062		
		7	10_529	9	english	literary			
		8	10_531	9	english	literary			
		9	10_532	9	english	literary			
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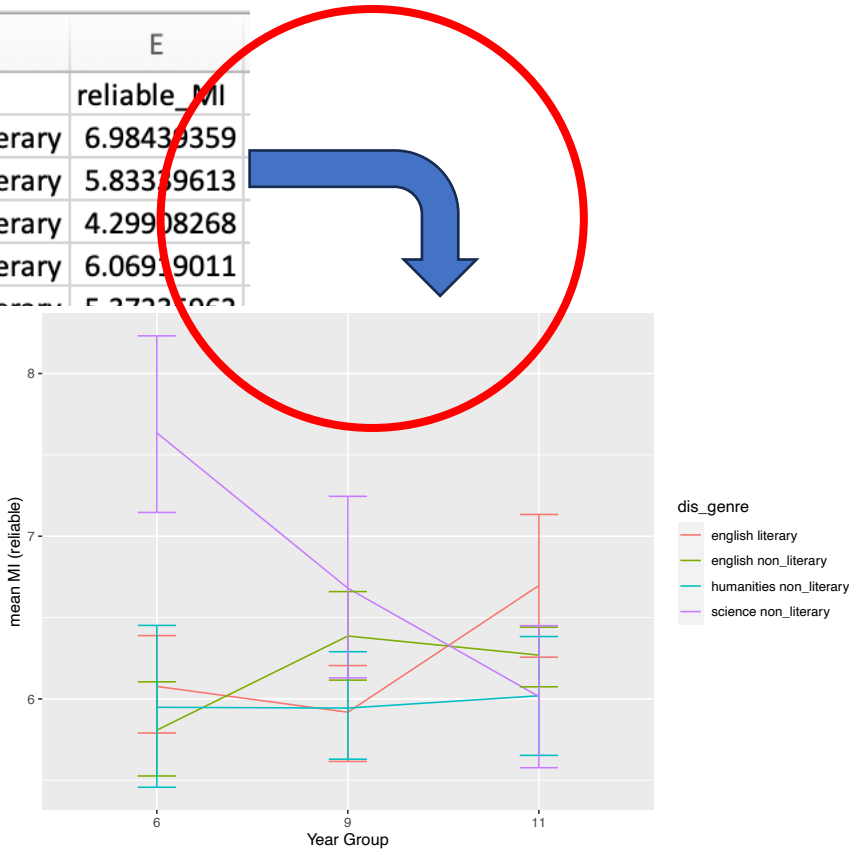
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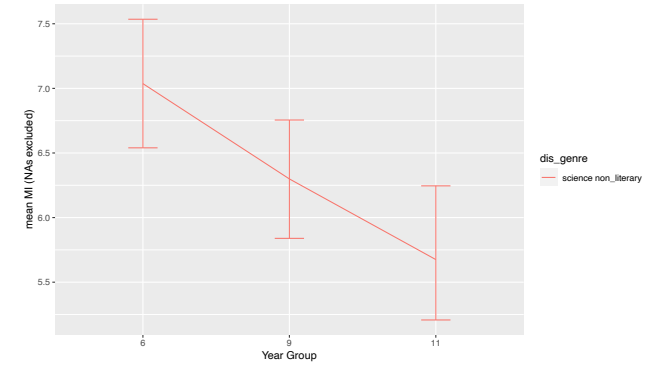
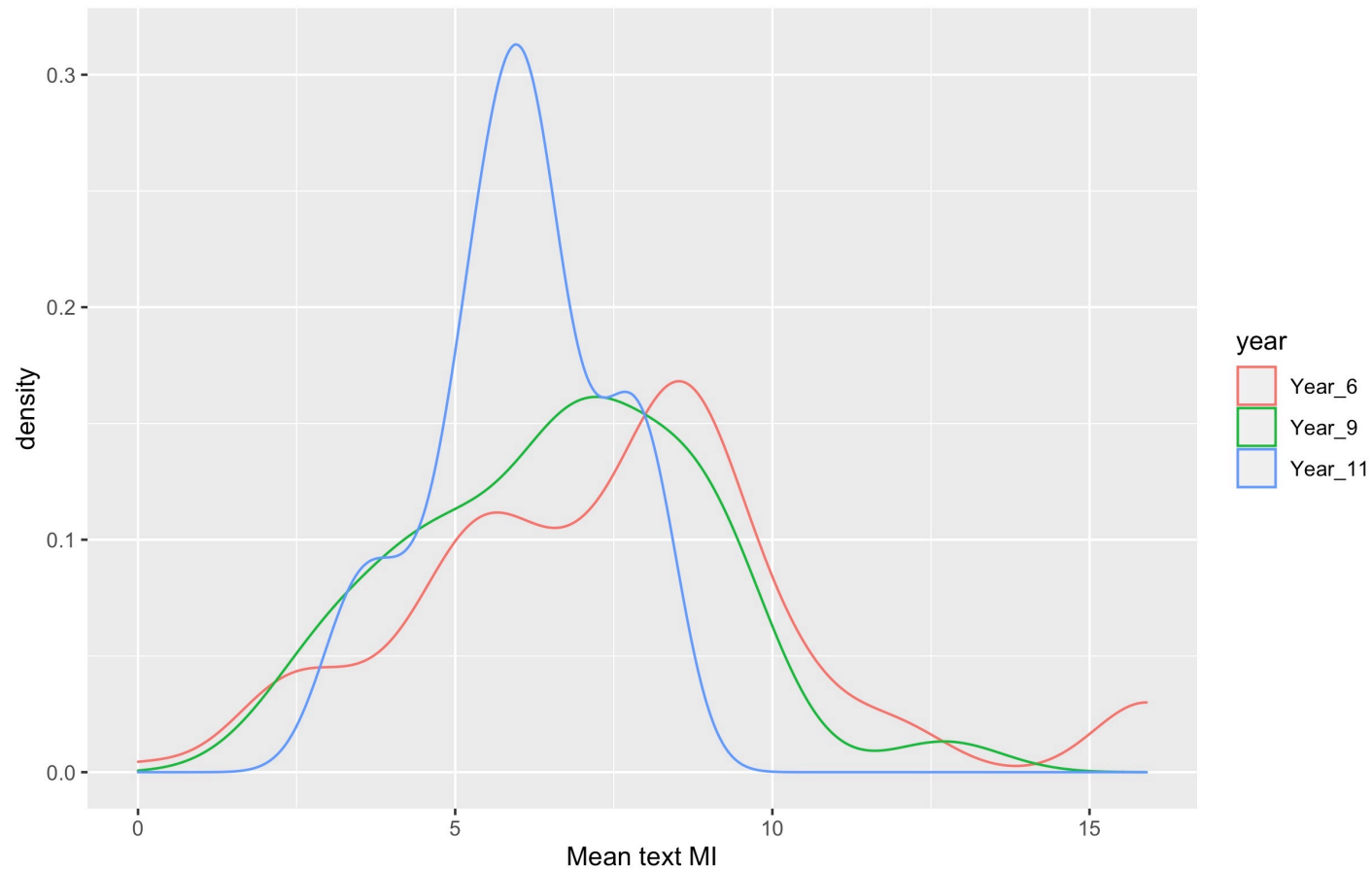
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E	F
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8	10_531	9	english	literary	
9	10_532	9	english	literary	
10	10_533	9	english	literary	
11	10_534	9	english	literary	
12	10_535	9	english	literary	



Getting behind the mean in Science



	A	B	C	D	E	
1	file_names	year_group	discipline	genre	reliable_MI	
2	6_339h	6	science	non_literary	15.8994559	
3	6_442d	6	science	non_literary	15.8994559	
4	6_445h	6	science	non_literary	15.8994559	
5	6_446i	6	science	non_literary	15.8994559	
6	6_447j	6	science	non_literary	15.8994559	
7	6_450j	6	science	non_literary	15.8994559	
8	6_454i	6	science	non_literary	15.8994559	
9	6_461g	6	science	non_literary	15.8994559	
10	6_339f	6	science	non_literary	12.0248912	
11	6_445f	6	science	non_literary	12.0248912	
12	6_446f	6	science	non_literary	12.0248912	
13	6_447h	6	science	non_literary	12.0248912	
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Dear Sir,

I am writing to inform you on my opinion about the scheme set up by the Direct Trust. In the article the seven pupils were described as "tearaways", "noisy" and "disruptive". I disagree.

Yes, although the trip is unfair to the students in England who have to continue their school work, would the trip not change their perspective on education? It is rightly stated that children in Jamaica value their education even though they are impoverished. This will enable the "tearaways" to see what opportunities are offered in the UK and because this isn't a holiday, they will be forced to see they are wasting an opportunity. They are continuing their studies in Jamaica, which further supports Person_name's statement. As well as this, the trip will provide valuable experience which helps in getting these misunderstood teenagers to respect their authority.

Moreover, the article portrays the charity in a negative light. These children are likely to need support and advice, which is what the Direct Trust offers. Surely we can't deny teenagers that right? This isn't coming from tax payers' money either, it is entirely fund-raised. These trips are what the money is used for. As is rightly stated, these pupils are close to exclusion; the Divert Trust works to get these pupils back into education. I well understood, these students are misunderstood, which leads to them needing attention that they may receive from their families.

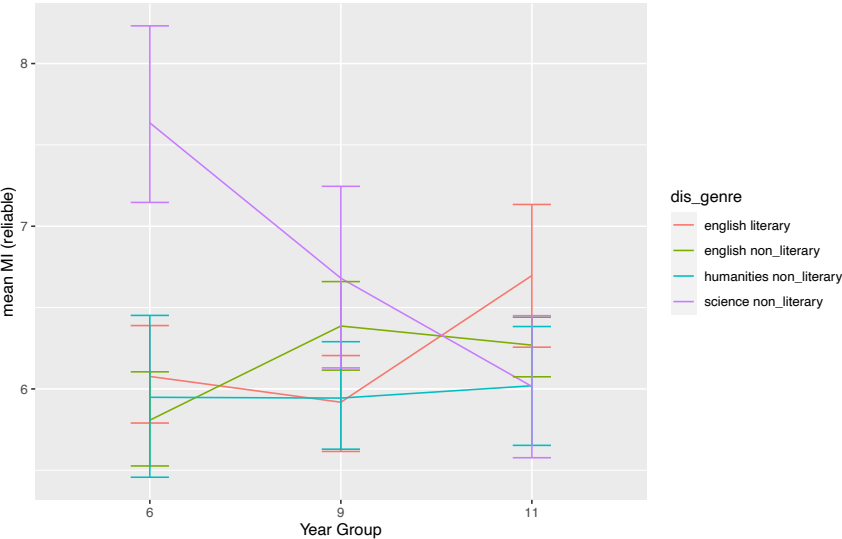
I hope your readers remember that travel broadens the mind, and that trips like these have been proven to work in the past. When these teenagers return, they will have realised the fantastic opportunities that this country offers, and £5000 is a small amount compared to allowing these people a brighter future.

Yours faithfully,

Person_name

mean MI = 5.83

E		F				
'eq		MI				
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1190	4.66005573					D
1365	8.03647076	1	file_names	year_group	discipline	genre
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975	11.2223373	3	1_2	11	english	non_literary
		4	1_3	11	english	non_literary
		5	1_4	11	english	non_literary
		6	1_5	11	english	non_literary
		7	10_529	9	english	literary
		8	10_531	9	english	literary
		9	10_532	9	english	literary
		10	10_533	9	english	literary
		11	10_534	9	english	literary
		12	10_535	9	english	literary



6_339h

	A	B	C	D	E	F	
1	w1	w2	c_freq	w1_freq	w2_freq	MI	
2	petri__jj	dish__nn	18	21	98	15.8994559	
3	petri__jj	dish__nn	18	21	98	15.8994559	
4	antibacterial__jj	gel__nn	NA	NA	NA	NA	
5	soily__jj	finger__nn	NA	NA	NA	NA	
6	unwashed__jj	finger__nn	NA	NA	NA	NA	
7	antibacterial__jj	gel__nn	NA	NA	NA	NA	
8							

6_339h

	A	B	C	D	E	F	
1	w1	w2	c_freq	w1_freq	w2_freq	MI	
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8							

6_442d

	A	B	C	D	E	F	
1	w1	w2	c_freq	w1_freq	w2_freq	MI	
2	petri__jj	dish__nn	18	21	98	15.8994559	
3	petri__jj	dish__nn	18	21	98	15.8994559	
4	unwashed__jj	finger__nn	NA	NA	NA	NA	
5	antibacterial__jj	gel__nn	NA	NA	NA	NA	
6							

6_339h

	A	B	C	D	E	F	
1	w1	w2	c_freq	w1_freq	w2_freq	MI	
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4	antibacterial__jj	gel__nn	NA	NA	NA	NA	
5	soily__jj	finger__nn	NA	NA	NA	NA	
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8							

6_442d

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4	unwashed__jj	finger__nn	NA	NA	NA	NA	
5	antibacterial__jj	gel__nn	NA	NA	NA	NA	
6							

6_445h

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4	unwashed__jj	finger__nn	NA	NA	NA	NA	
5	clean__jj	finger__nn	NA	NA	NA	NA	
6	dirty__jj	finger__nn	NA	NA	NA	NA	
7	unwashed__jj	finger__nn	NA	NA	NA	NA	
8	clean__jj	finger__nn	NA	NA	NA	NA	
9							

6_339h

	A	B	C	D	E	F
1	w1	w2	c_freq	w1_freq	w2_freq	MI
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6_339h

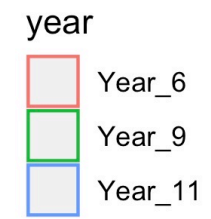
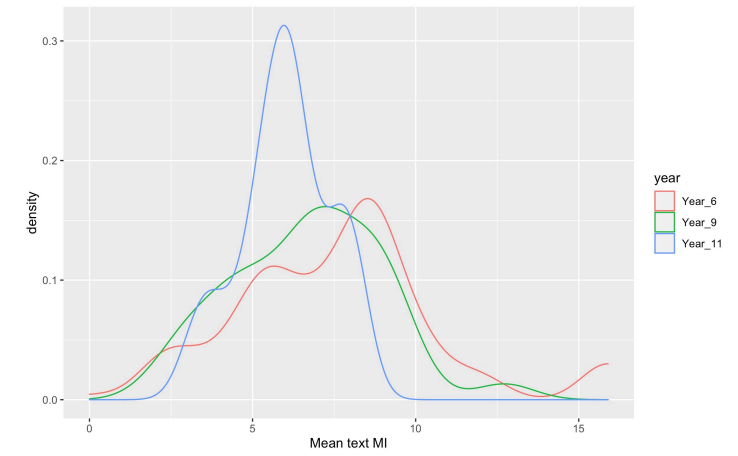
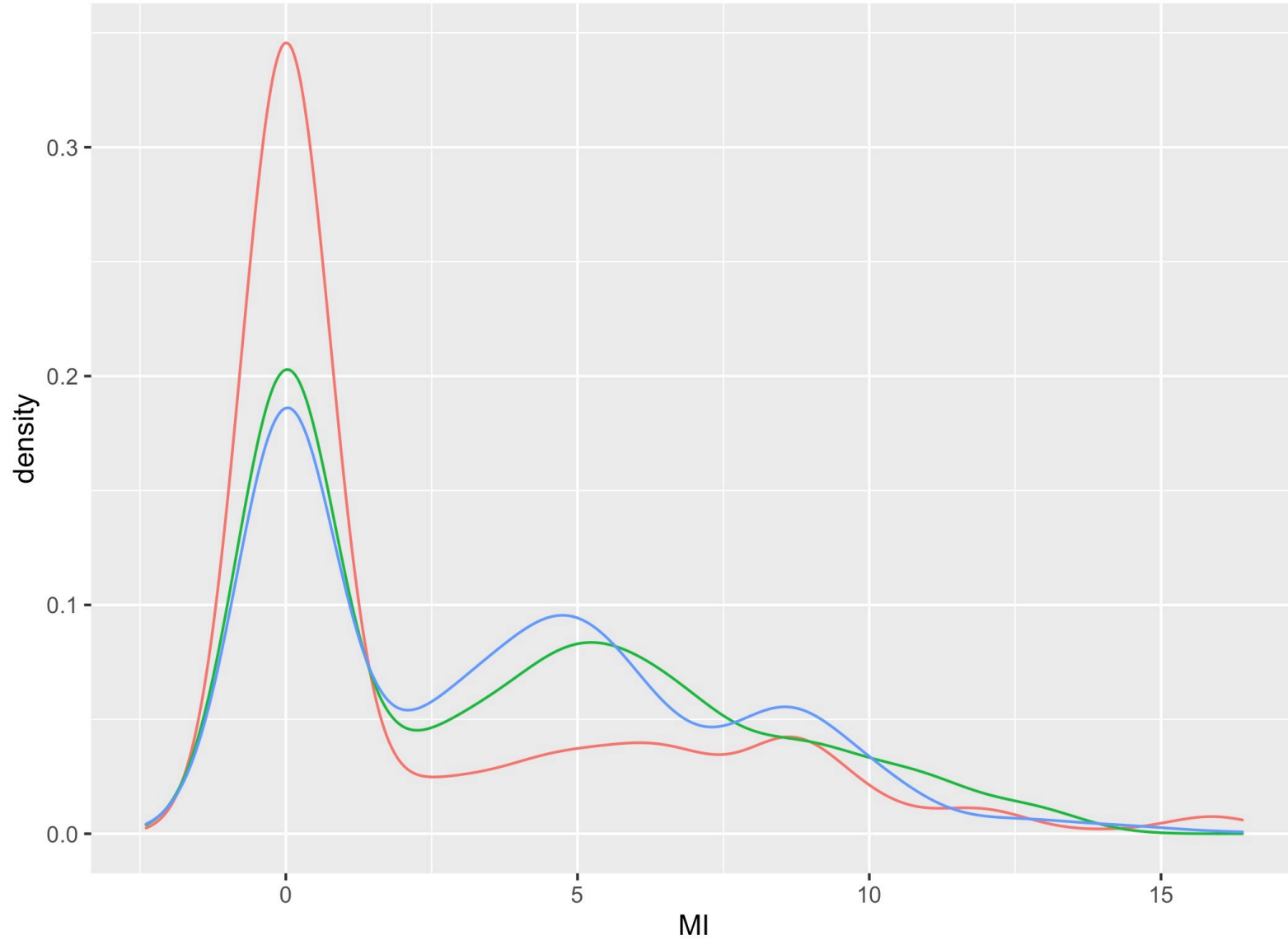
	A	B	C	D	E	F
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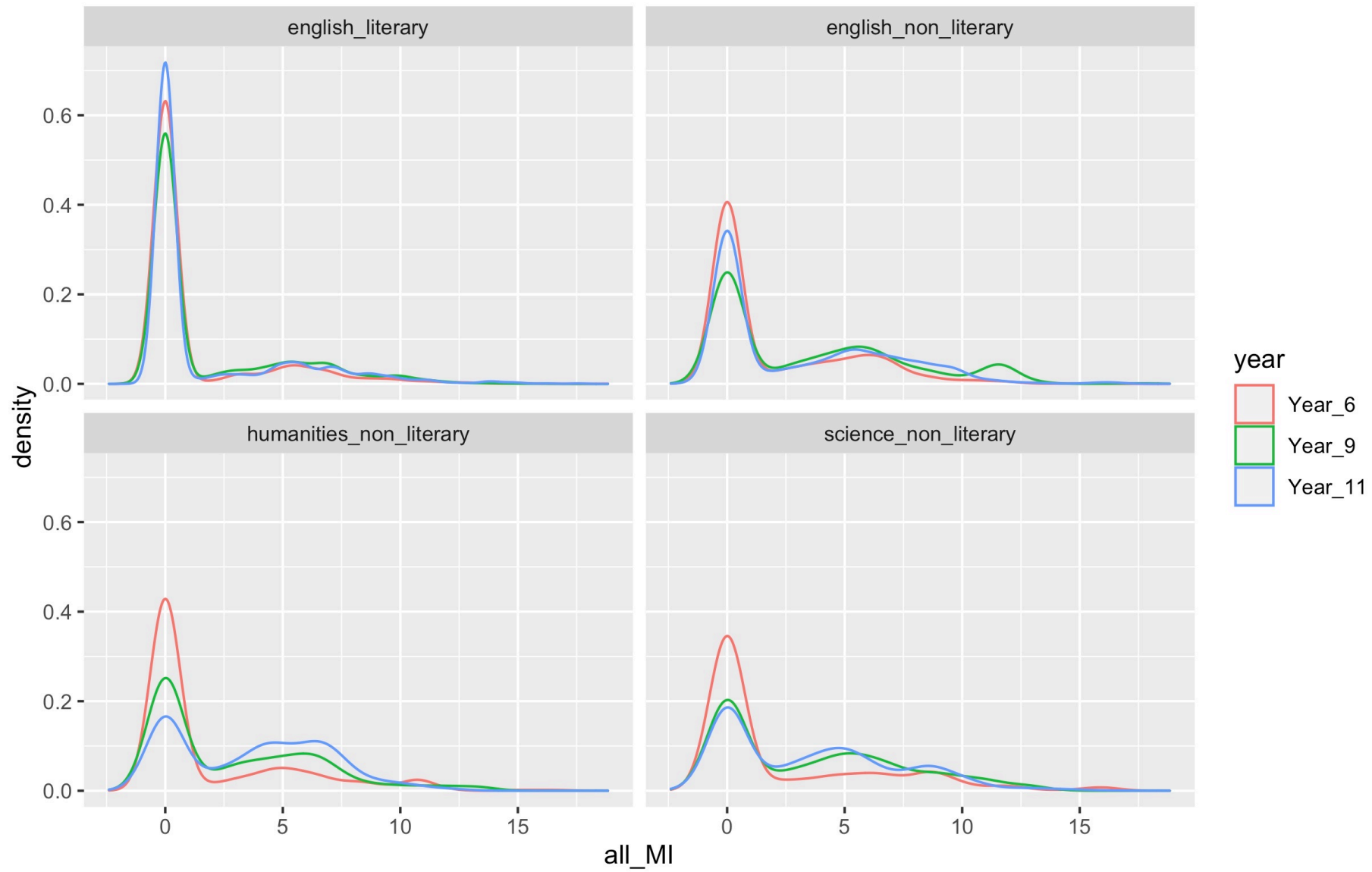
6_442d

	A	B	C	D	E	F
1	w1	w2	c_freq	w1_freq	w2_freq	MI
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Tentative conclusions

- Primary school children use far more combinations that are infrequent in mature academic writing than secondary school children
- In science writing, when primary children do use frequently attested combinations, these tend to be very strongly associated combinations
- And may be associated with specific tasks

A reminder

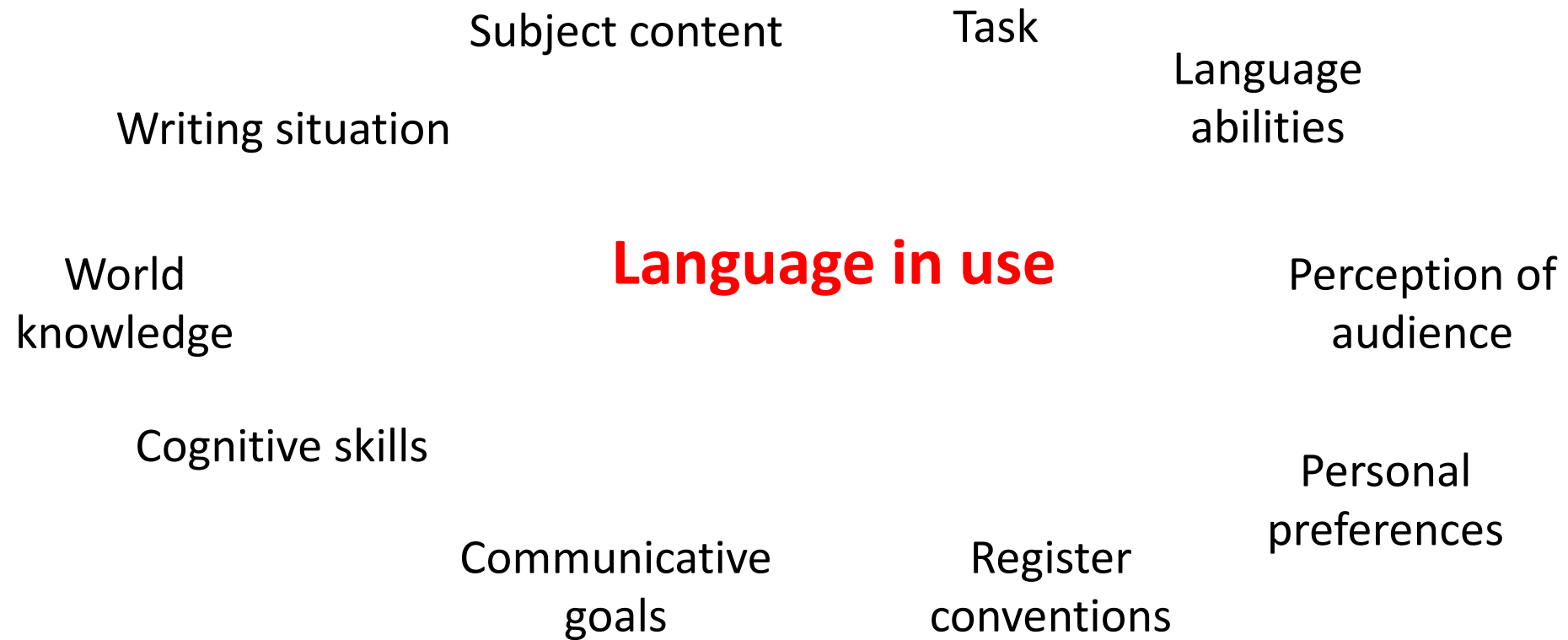
What we're trying to do...

- Simplify our data so that we can see broader patterns
- Without losing important information

Methodological lessons

- This method compressed information into mean scores twice:
 - This compression highlighted interesting patterns
 - **But**, in both cases, we needed to go back to the full range of scores to understand them and elaborate on them
- Key aspects of the patterns could only be understood by going back to the texts...

The problem of interpretation



6_339h

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9							



6_339h.txt

Microbes Experiment

We went to the college to grow microbes in petri dishes. First we divided the petri dish into 3 Sections. In Section one we put a fingerprint that had touched Soil. In Section 2 we put a fingerprint that hadn't touched anything but hadn't been washed. In Section 3 we put a fingerprint that had touched antibacterial gel. We then put the lid on. The dishes were left at the college for the weekend so that the microbes could form.

Observation

We observed that the soily finger had grown the most bacteria. The unwashed finger had grown quite a bit. But the finger that had the antibacterial gel on had grown the fewest.

Conclusion.

We found out, that you must wash your hands thoroughly

6_339h.txt

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6_442d.txt

Microbes Experiment

We went to the college to grow microbes in petri dishes. We divided a petri dish into three sections. Then we labeled them 1-3. After that we put a finger print in that had been put in some soil. In section two we put the finger print from an unwashed finger and finally in section three we put in a finger that had been washed with antibacterial gel. Then we let it for 48 hours then we saw what happened.

We observed that section one had grown the most, section two had grown fewer and section three had grown the least.

In conclusion we learnt how important it is to wash are hands.

6_339h.txt

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6_442d.txt

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6_445h.txt

Microbes Experiment

We went to the College to grow microbes in petri dishes. We divided the petri dish into three sections. One with a finger print that touched some composs. A fingerprint that had not been washed. A finger print that had been washed. We put the composs finger in section one. In section two we put the unwashed finger. In section three we put the clean finger. We seled them up. We left them at the College over the weekend.

We saw that in section 1 (dirty finger) had grown lots of microbes. In section 2 (unwashed finger) had grown quite a lot of microbes. In section 3 (clean finger) had grown not a lot of microbes. That's why we like to keep our hands clean!

Should the Spangebob liv ande de si? We have been discussting whether Spongbob should live under the sea.

Many people believe that Spongbok should live ander the see, bicafe firstly he soaks up water. Secenly hi wash the rocs in the see. On the adh meni pepo beliv he shut not liv in the see bicoss hi is not e fihs.

In conclusion there are many great reasons for and against for spong bov should liv andr the see bicos deris hi hous.

Wat do uia finc?

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In conclusion there are many great reasons for and against **for** spong bov should liv andr the see bicos **deris hi hous**.

Wat do uia finc?

Should Sbungab lifundur The see? We have been discussing whether Sbanchbab should lif under the sea.

Many people believe that Sbonchbab should live undur the sea because fersly **Sbonbob can** sacup **the sea and** secle **Sbanbab can clen** the racs. on the uver hand many **dat** blef **that Sbongbab** should not live **under** the sea because he isent a fish **and he lifs in a haus and lifs bsid the sea**.

in conclusion there are many great reasons for and against **wefer** Sbongbob should lif under The sea. **but I blef that Sbongbob should lif under the sea because thas wer hes home is**.

Should Jhingerbred man be eaten?

We have been discasing wether Jhingrbred man **should** be eaten or not.

Many people belive that the Jinjerbred man **should** be eaten **because firstly** he is quit mean and he runs away from the cow and the silly old horse. **Secondly** the cow and the silly old horse are hungry.

On the ather hand people disagry they think Jinjer bread man shouldn't be eaten.

In conclusion there are many great reasons why Gingrbread man shouldn't be eaten because he woudnt fill the animalls up. But I belive he shouldn't be eaten because he is tiny.

I think he should be eaten because he myte feell angry and chase the animals **what do you think?**

Should Sleeping Beaty stay asleep?

We have been discussing wheather Sleeping Beaty **should** stay asleep.

Many people belive that Sleeping Beauty **should** stay **because fistly**, she has been sleeping for one hundread years. **Secondly**, she wants to be lazy. Lastly she doesn't want to work!

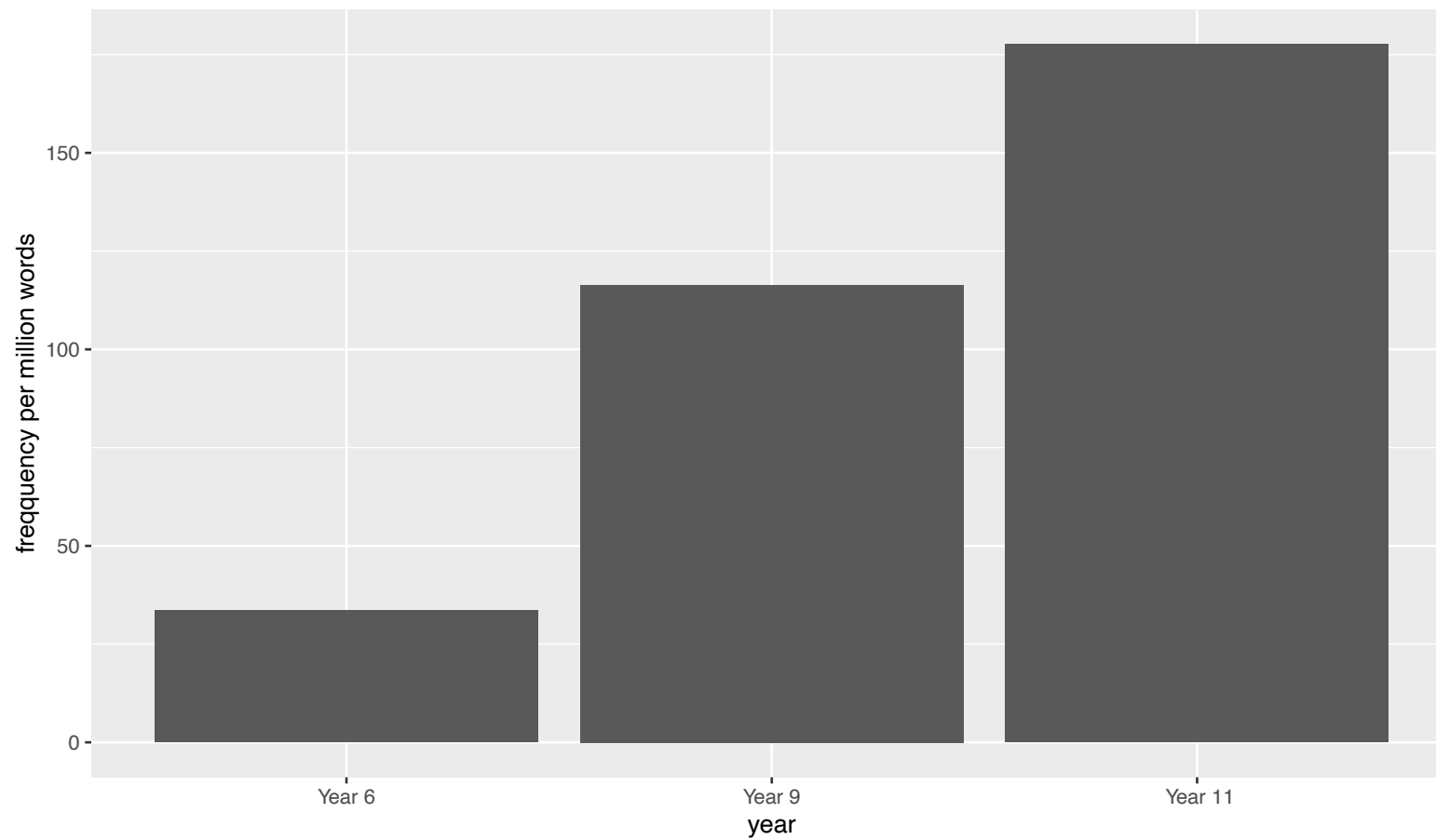
On the other hand some people dissagre that's because she has been sleeping nearly forever.

In conclusion, there are many great reasons for and against for sleeping Beauty to stay asleep but I think that Sleeping Beauty should have made the corect choice

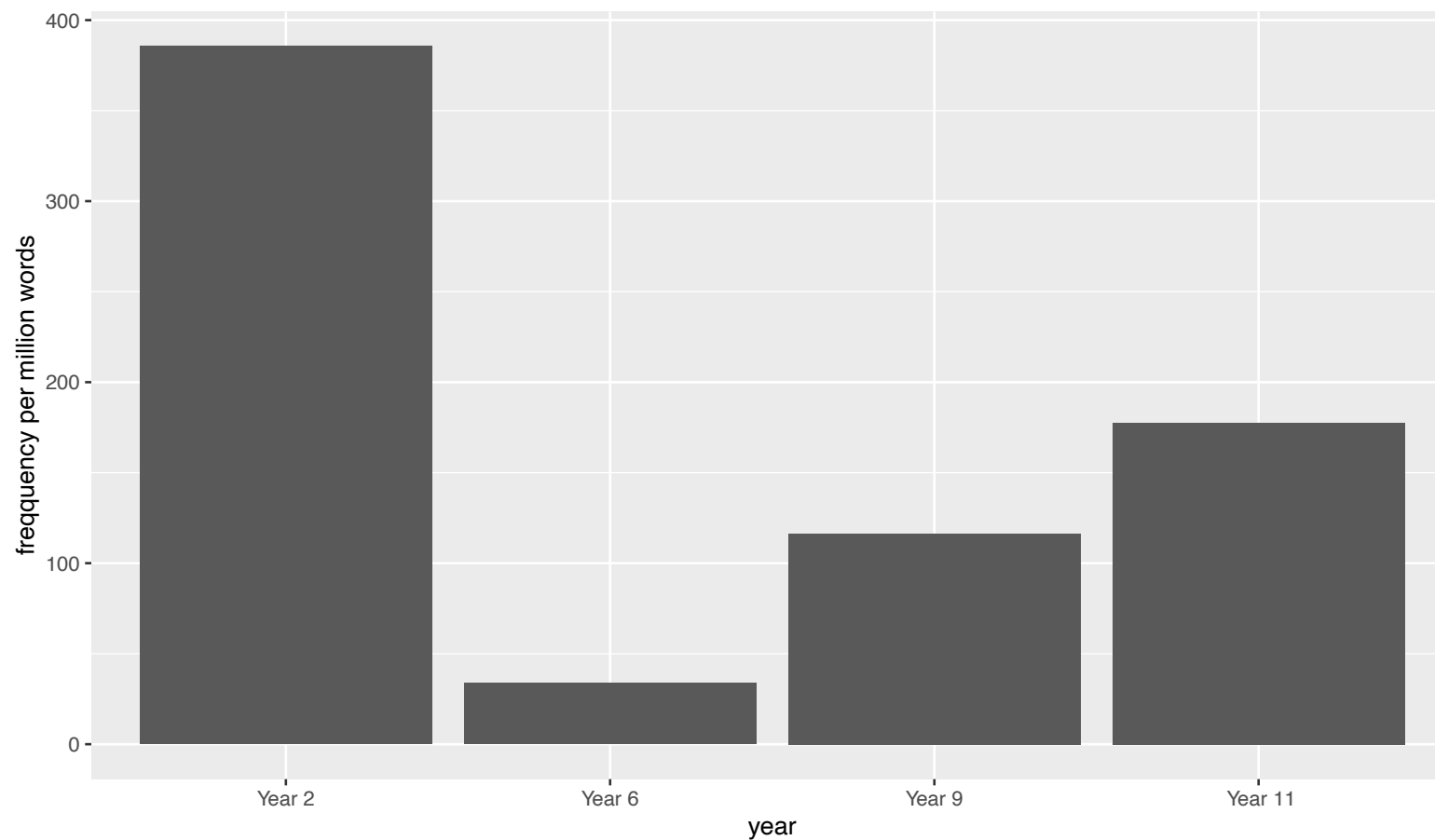
She has to wacke up because she is a princess. **What do you think?**

etc... 34 similar texts, written by 21 different children

on the other hand



on the other hand



Conclusions

- Quantification can bring out key patterns but can also mislead
- Use of phraseological language is tightly bound to contexts
- ...and these contexts play crucial roles in learning
- Broad-brush quantitative analyses need to be interpreted with caution
- Fine-grained follow up analyses and close attention to individual texts essential to understanding broad patterns

References

Durrant, P. (2022). Studying children's writing development with a corpus. *Applied Corpus Linguistics*.

Durrant, P., & Brenchley, M. (2021). The development of academic collocations in children's writing. In P. Szudarski & S. Barclay (Eds.), *Vocabulary Theory, Patterning and Teaching* (pp. 99-120). Bristol: Multilingual Matters.

Thank you!

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