Asking too much?
The rhetorical role of questions in political discourse

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Questions?
Questions?

Who is the Prime Minister of the United Kingdom?
Why didn’t you cite my paper?
Questions serve many rhetorical roles.
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Questions serve many rhetorical roles.

“The Prime Minister is rightly shocked by the revelations that many food products contain 100% horse. Does he share my concern that, if tested, many of his answers may contain 100% bull?”
Our goal: structuring the space of questions
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- Will you update us on Afghanistan?
- Will you apologise for leading us into the Iraq disaster?
- How can you justify this tax grab on pensioners?
Our goal: structuring the space of questions

Will you update us on Afghanistan?

Will you apologise for leading us into the Iraq disaster?

How can you justify this tax grab on pensioners?

Rhetorical role: Seeking information
Our goal: structuring the space of questions

Will you update us on Afghanistan?

Will you apologise for leading us into the Iraq disaster?

How can you justify this tax grab on pensioners?

**Rhetorical role:**

Seeking information

Accusatory
Our goal: structuring the space of **questions**

**Rhetorical role:**

- **Seeking information**

**Challenge:** no labels.

- Will you update us on Afghanistan?
- Will you apologise for leading us into the Iraq disaster?
- How can you justify this tax grab on pensioners?
Main insight: use the answers
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Will you update us on Afghanistan?

Will you apologise for leading us into the Iraq disaster?

How can you justify this tax grab on pensioners?

We need to consider force protection...
Main insight: use the answers

Will you update us on Afghanistan?

Will you apologise for leading us into the Iraq disaster?

How can you justify this tax grab on pensioners?

We need to consider force protection...

I am afraid that I won’t, because I believe it is right to support the people in Iraq.
Main insight: use the answers

Will you update us on Afghanistan?

We need to consider force protection...

Will you apologise for leading us into the Iraq disaster?

I am afraid that I won’t, because I believe it is right to support the people in Iraq.

How can you justify this tax grab on pensioners?

I am afraid that I won’t accept any lectures on economics from you.
Main insight: use the answers

We need to consider...

I am afraid that I won’t, because...

I am afraid that I won’t accept...
Main insight: use the answers

Will you update us on Afghanistan?
We need to consider...

How can you justify this tax grab on pensioners?

Will you apologise for leading us into the Iraq disaster?

I am afraid that I won’t, because...

I am afraid that I won’t accept...
**Motifs of questions and answers**

Will you update us on Afghanistan?

Will you apologise for leading us into the Iraq disaster?

How can you justify this tax grab on pensioners?

We need to consider force protection...

I am afraid that I won’t, because I believe it is right to support the people in Iraq.

I am afraid that I won’t accept any lectures on economics from you.
Motifs of questions and answers

~2000 automatically extracted question motifs:

will ... update?
is it not true...?
will ... apologise?
what progress has been made ...?
does ... agree?
will ... consider?
why does ... ?
how can ... justify?

~3000 automatically extracted answer motifs:

need to consider
are wrong
have discussed
agree completely
am grateful
am afraid
should think
will appreciate
say is
Questions with similar rhetorical functions will map to similar answers.

- will ... update?
- is it not true...?
- will ... apologise?
- what progress has been made ...?
- does ... agree?
- will ... consider?
- why does ... ?
- how can ... justify?

need to consider
are wrong
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agree completely
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Structuring the space of answers

Questions with similar rhetorical functions will map to similar answers.
Questions with similar rhetorical functions will map to similar answers.

Structuring the space of answers

I am afraid that you are wrong...

I agree completely...

Documents: answers
Terms: answer motifs
Questions with similar rhetorical functions will map to *similar answers*

**Structuring the space of answers**

SVD: $A \approx U_A S V_A^T$

I am afraid that you’re wrong ...

Low rank answer space
Questions with similar rhetorical functions will map to similar answers.

- need to consider
- are wrong
- have discussed
- agree completely
- am grateful
- am afraid
- should think
- will appreciate
- say is

≈

Low rank answer space
Questions with similar rhetorical functions will map to similar answers

will ... update?
is it not true...?
will ... apologise?
what progress has been made ...?
does ... agree?
will ... consider?
why does ... ?
how can ... justify?

Low rank answer space
Questions with similar rhetorical functions will map to similar answers.
I am afraid that you are wrong ...

I agree completely...

Documents: answers
Terms: answer motifs
Q: Do you agree with the policy?
A: I agree completely...

Q: Will you apologise for the disaster?
A: I am afraid that you are wrong...

Terms: question motifs
Documents: question-answer pairs
Questions with similar rhetorical functions will \textbf{map} to similar answers

\textbf{Mapping questions into answer space}

\[ Q = \hat{Q} S V_A^T \]
Questions with similar rhetorical functions will **map** to similar answers

Mapping **questions** into **answer space**

\[ \hat{Q} = Q V_A S^{-1} \]
Structuring question space

will...
update

will...
apologise

how can ...
justify
Structuring question space

will... update

will... apologise

how can ... justify

will... update

will... apologise

how can ... justify
Structuring question space

will... update

will... apologise

how can ... justify

$\hat{Q}$

K-means

will... update

wil... apologise

how can ... justify
Structuring question space

Inferring question types:

Will you come clean about the scandal?
Structuring **question space**

Inferring question types:

*Will you come clean about the scandal?*
Structuring question space

Inferring question types:

Will you come clean about the scandal?
Examining typical answer motifs:

- am afraid
- need to consider
- is wrong

Inferring question types:

- will...
- update
- how can ...
- will...
- apologise
- justify
Parliamentary question periods
Parliamentary question periods

200,000 questions 1979 - 2016

2000 askers, 1000 answerers

Data available!
**Question types in Parliament:**

0. Issue update
1. Shared concerns
2. Narrow factual
3. Prompt for comment
4. Agreement
5. Self promotion
6. Concede & accept
7. Condemnatory
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0. Issue update
1. Shared concerns

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Will you update us on Afghanistan?

What funding will be given to the College of Dentistry?
Question types in Parliament:

0. Issue update
1. Shared concerns
2. Narrow factual
3. Prompt for comment
4. Agreement
5. Self promotion
6. Concede & accept
7. Condemnatory

Will you accept that [Brexit] will undermine our security?

Will you apologise for leading us into the Iraq disaster?
Question types in Parliament:

0. Issue update
1. Shared concerns
2. Narrow factual
3. Prompt for comment
4. Agreement
5. Self promotion
6. Concede & accept
7. Condemnatory

Do you agree that the Government [should continue] its strong economic policies?
Question types in Parliament:

0. Issue update
1. Shared concerns
2. Narrow factual
3. Prompt for comment
4. Agreement
5. Self promotion
6. Concede & accept
7. Condemnatory

Are you aware that my parish church is pleased to receive a grant?
Question types in Parliament:

0. Issue update
1. Shared concerns
2. Narrow factual
3. Prompt for comment
4. Agreement
5. Self promotion
6. Concede & accept
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Does our method produce sensible question types?
Sanity check: alignment with existing labels

Expert annotations from Bates et al., 2014
Also available in data release.
Sanity check: alignment with existing labels

Classifying unanswerable vs standard questions:
BOW: 55%
Latent question features: 66%

Further details in paper

Expert annotations from Bates et al., 2014
Also available in data release.
Sanity check: alignment with political science literature
Sanity check: alignment with political science literature

Supporting and bolstering status of government policies

Criticizing and creating negative press

Louwerse, 2012; Cowley, 2002; Spirling & Mclean, 2007; Eggers & Spirling, 2014
Sanity check: alignment with political science literature

More likely to be asked by government MP
Sanity check: alignment with political science literature

Issue update

Narrow Factual

More likely to be asked by government MP
Sanity check: alignment with political science literature

Agreement

More likely to be asked by government MP
Sanity check: alignment with political science literature

Issue update
Narrow Factual

Concede & accept
Condemnatory

More likely to be asked by government MP
New investigation: how does questioning behaviour vary with tenure?
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More enthusiastic & vigorously critical?

Hypothesis 1

Catalano, 2009
Kam, 2009

Less enthusiastic?
New investigation: how does questioning behaviour vary with tenure?

**Hypothesis 1**
- More enthusiastic & vigorously critical?
  - Catalano, 2009
  - Kam, 2009

**Hypothesis 2**
- Tempered by stake in future promotion?
  - Cowley, 2002
  - Benedetto & Hix, 2007

- Less to lose & more antagonistic?
  - Less enthusiastic?
New investigation: how does questioning behaviour vary with tenure?
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Issue update

Older median tenure, government MPs
New investigation: how does **questioning** behaviour vary with tenure?

**Issue update**

**Self-promotion**
**Concede & accept**
**Condemnatory**

**Older median tenure, government MPs**

- 5 median tenure (years)
- 10
New investigation: how does questioning behaviour vary with tenure?

Hypothesis 2: Less to lose.

Older median tenure, government MPs

Self-promotion
Concede & accept
Condemnatory

Issue update
New investigation: how does questioning behaviour vary with tenure?

Hypothesis 2: Less to lose.

(self-promotion, concede & accept condemnatory type asked more by younger opposition MPs)

Kam, 2009

Older median tenure, government MPs

Issue update

( condommatory type asked more by younger opposition MPs)
Conclusion

● **Questions** have many rhetorical roles.
Conclusion

- Questions have many rhetorical roles.
  - We introduce an unsupervised method to infer these roles, using the answers.
Conclusion

- **Questions** have many rhetorical roles.
  - We introduce an unsupervised method to infer these roles, using the **answers**.
- These roles reflect social information in settings such as **parliamentary question periods**, allowing us to discover new insights.
Future work: Investigating parliamentary dynamics and question types

Data and code:
Cornell Conversational Analysis Toolkit
http://convokit.infosci.cornell.edu/
Future work: other settings

Why didn’t you burn the tapes?

I didn’t believe there was a reason to ...
Future work: *questions* are just the beginning

Why didn’t you burn the tapes?

I didn’t believe there was a reason to ...

But looking back on it now, *don’t you wish you’d destroyed them?*

“We’d now like to open the floor to shorter speeches disguised as questions.”

(credit: Steve Macone, New Yorker)
Future work: other settings
Future work: other settings

What will you do leading into the US Open?

https://i.ytimg.com/vi/cVVfaAYLygE/maxresdefault.jpg
Future work: other settings

Was it her game that gave you problems?
Future work: other settings

What did your mother say to you after the game?