A Sentiment-labelled Corpus of Hansard Parliamentary Debate Speeches

Gavin Abercrombie & Riza Batista-Navarro
Lucy Powell
MP for Manchester Central
Lucy Powell - Contributions

Lucy Powell
Labour (Co-op)
Commons, Manchester Central (2012 - present)
Lucy Powell - Contributions

Lucy Powell
Labour (Co-op)
Commons, Manchester Central (2012 - present)
Sentiment analysis with supervised classification

Labelled training data

$n$-grams

Sentiment classifier

Unseen test data
Motion: “I beg to move that this House…”

Speaker 1: “I agree with the motion …”
Speaker 2: “I disagree with the motion …”

... Speaker $n$: “(an opinion about the motion)”

Division: ‘Aye’ or ‘No’
Motion: “I beg to move that this House…”

Speaker 1: “I agree with the motion …”
Speaker 2: “I disagree with the motion …”
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Speaker n: “(an opinion about the motion)”

Division: ‘Aye’ or ‘No’

• 1  • 0
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I am pleased that the new royal charter has been taken seriously and dealt with positively by the Government.

Under the draft agreement, I see a BBC that suits the modern broadcasting and digital environment that we know today.

I am therefore pleased to support the motion and agreement, which will guarantee the BBC’s important place in our society for many years to come.
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Many of us in this House think that the idea of forcing the BBC to pay for free television licences is a complete disgrace.

Does the Secretary of State understand the concern felt among those at BBC Alba that the framework agreement is not to their advantage?

Does the hon. Gentleman not find it bizarre that, because of the inexperience of the appointee, the BBC has had to create another post, at a time when it says it has no money?
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I think that this is a very good move. I hope that the Government will implement the formula sooner rather than later to give all our children a fighting fair chance.
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My hon. Friend is talking about the broken pledge on funding for schools. Is she aware that 74 out of 77 schools face real-term cuts by 2019?

The motion before the House makes it clear that our schools are facing a cocktail of cuts that will see 98% of schools lose out.

In my constituency, funding per pupil is being reduced further. Why is David Cameron’s promise being broken?
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Positive motions

Positive speeches: 
{“pleased”, “support”, “positive”, ...

Negative motions

Negative speeches: 
{“concern”, “bizarre”, “disgrace”, ...

Positive motions

Positive speeches: 
{“broken”, “cuts”, “reduced”, ...

Negative motions

Negative speeches: 
{“support”, “grateful”, “right”, ...}
HanDeSeT corpus

Hansard Debates with Sentiment Tags
Inter-annotator agreement

Cohen’s $k$

<table>
<thead>
<tr>
<th></th>
<th>Motion</th>
<th>Speech</th>
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<tbody>
<tr>
<td>Round 1</td>
<td>0.56</td>
<td>0.57</td>
</tr>
<tr>
<td>Round 2</td>
<td>0.91</td>
<td>0.85</td>
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</tbody>
</table>
Debate = \{\text{Motion, Speech}\}

Speech = \{\text{Utt. 1, Utt. 2, Utt. 3, Utt. 4, Utt. 5}\}
Debate = \{Motion, Speech\}

Speech = \{Utt. 1, Utt. 2, Utt. 3, Utt. 4, Utt. 5\}

Motions and speeches
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Speech = \{\text{Utt. 1, Utt. 2, Utt. 3, Utt. 4, Utt. 5}\}

Motions and speeches $\xrightarrow{1}$ Rebel

Motions and speeches $\xrightarrow{0}$ }
Vote labels by party – ‘loyal’ and ‘rebel’ votes

SNP 94
Con 468
Lab 524
LD 71
DUP 23
PC 15
UUP 11
Ind 9
Gr 5
SDLP 3
SNP 94
Lab 524
Con 468
LD 71
DUP 23
PC 15
UUP 11
Ind 9
Gr 5
SDLP 3
Manual labels by party – ‘loyal’ and ‘rebel’ speeches

Con 442
Lab 502

SNP 94
LD 67
DUP 23
PC 15
Ind 9
Gr 5
SDLP 3
UUP 11
Lab 45
“Many enterprises now find themselves disadvantaged. That needs to be addressed by the Government.”

Vote label: •0, manual label: •1
“I am therefore pleased to support the motion.”
Vote label: 0, manual label: 1
HanDeSeT corpus

Hansard Debates with Sentiment Tags

mendeley.com/datasets
‘Aye' or 'No'?
Speech-level Sentiment Analysis of Hansard UK Parliamentary Debate Transcripts

Session: P57 - Opinion Mining / Sentiment Analysis (3)

LREC Friday 11th May 11.45

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