A Sentiment-labelled Corpus of Hansard Parliamentary Debate Speeches

Gavin Abercrombie & Riza Batista-Navarro
<table>
<thead>
<tr>
<th>Lucy Powell</th>
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Labour (Co-op)
Commons, Manchester Central (2012 - present)
Sentiment analysis with supervised classification

- Labelled training data
- Unseen test data

$n$-grams

Sentiment classifier

$+$ $/$ $-$
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 …”

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

Division: ‘Aye’ or ‘No’

1

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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 inexperiance 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>
</tr>
</tbody>
</table>
Debate = \{\text{Motion, Speech}\}

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

\text{Motions and speeches} \rightarrow \{1\}

\text{Motions and speeches} \rightarrow \{0\}
Debate = \{\text{Motion, Speech}\}

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

\begin{align*}
\text{Motions and speeches} & \rightarrow \{1, 0\} \\
\text{Rebel} & \rightarrow \% \\
\text{Labour} &
\end{align*}
Speeches by party

Con 473

Lab 547

SNP 94

UUP 11

DUP 23

LD 71

SDLP 3

Gr 5

PC 15

Ind 9
Manual labels by party – ‘loyal’ and ‘rebel’ speeches

Con 442
Lab 502

SNP 94
DUP 23
UUP 11
PC 15
LD 67
Ind 9
Gr 5
SDLP 3
“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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@gavin_does_nlp