Visit the dome presentation
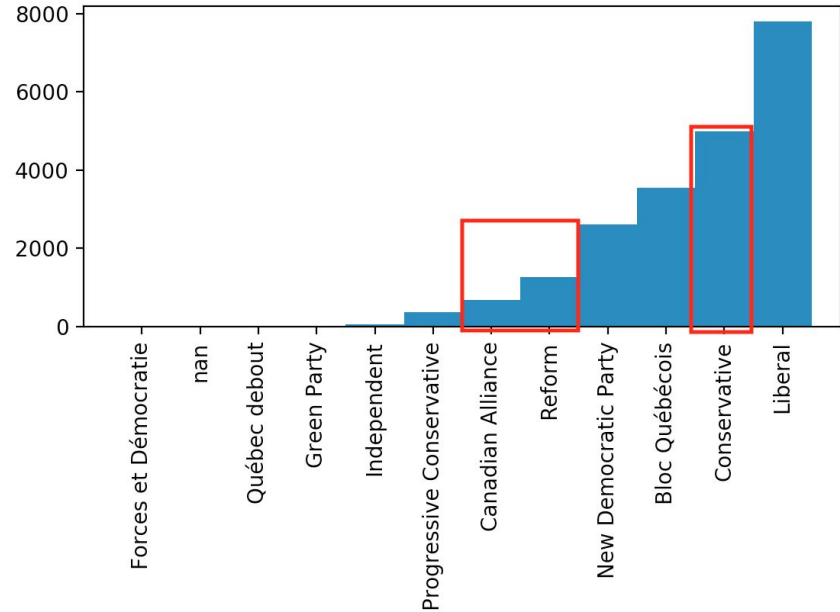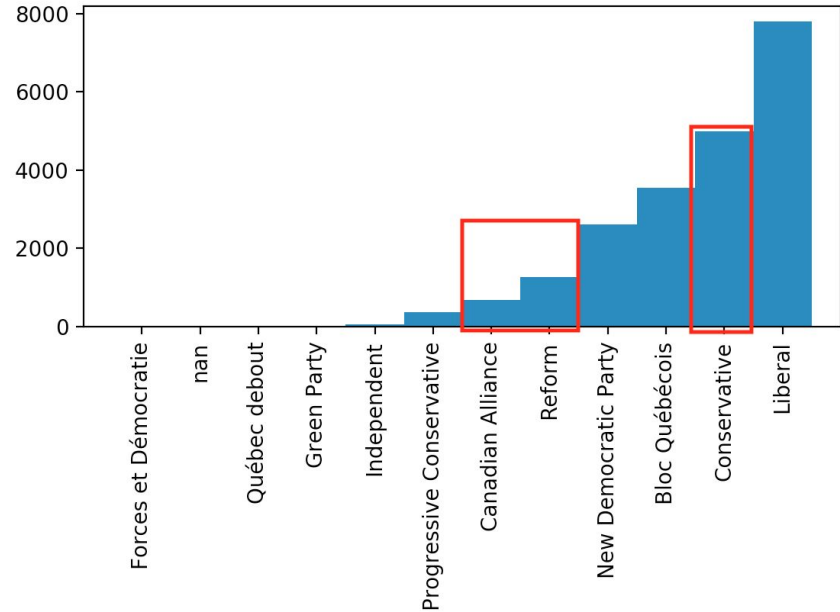
2019.08.19 Annie

Statistics

- Statement by members from 1994 to 2017
- Total number of speeches 21,332
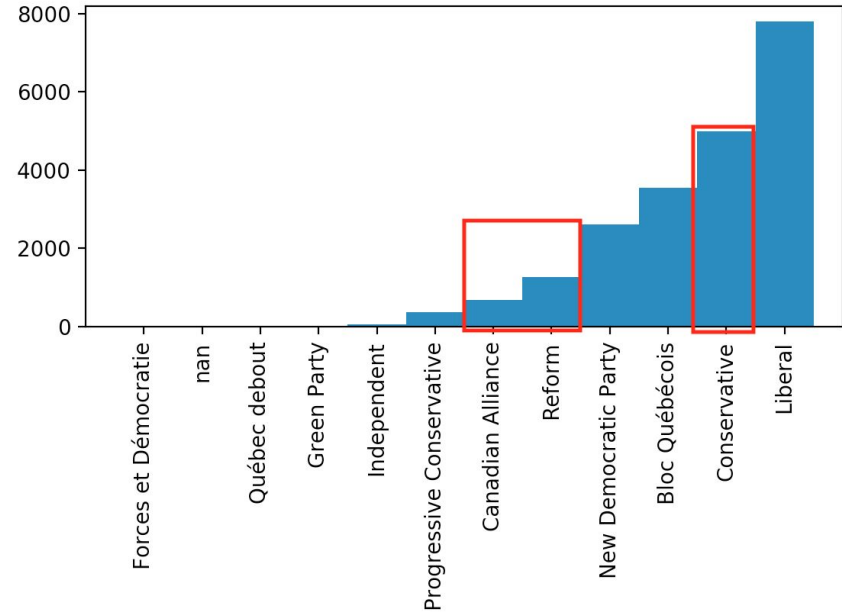- Some parties name were mixed up => check in wiki

The Canadian Parties

- 2 main parties the take turn to hold the government:
  - Liberal and Conservative
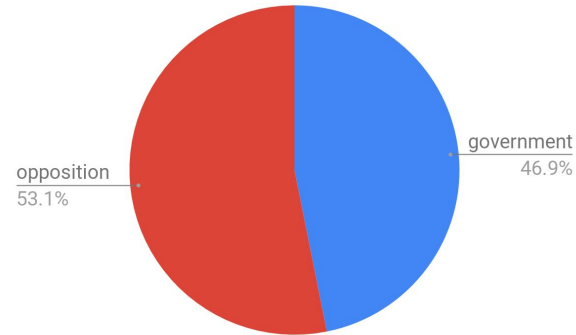- During the whole period, the parties change their names, also merge and split
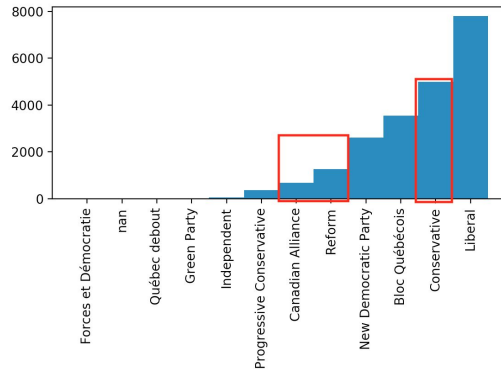
Parties' Transition

- E.g Reform party is succeeded by Canadian Alliance, which is merged with Progressive Conservative Party to modern Conservative Party
- The Bloc Québécois supports Quebec sovereignty.

Frequencies of parties giving speeches

- If consider separate parties, Conservative and Liberal give most of the speeches.

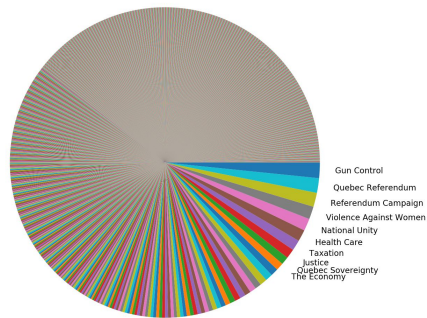- If consider the government against opposition, it is quite balance

Split data into periods

- According to parliament durations, since 1867, Canada has 42 parliaments and each last appr. 4 years. (about 1300 - 1800 speeches each)
- We assume that the viewpoint of the parties towards a specific topic don't change so much within one parliament period => divide dataset correspondingly.
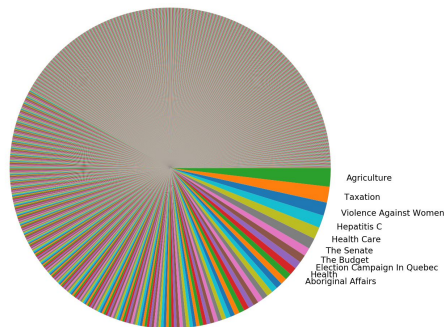- Because of lacking of data until 1990, there are only 8 periods.

Separate data of different topics

- The data during 1990 has only one topic: petition
- A lot of topic only occurs one or very few times: e.g 100th birthday, museums in canada, nato parliamentary assembly, nato jet pilot program, national AIDS awareness week, national day of mourning, organization of homeless youth, towards the night after kyoto, ... => related to one time event / program
- The frequent topics often occur for >20 times to appr. 50 times or even more Taxation (200 times), Agriculture (100 times) in each term
- Base on the frequent topics, we can see the main problems the parliament dealing with during the term
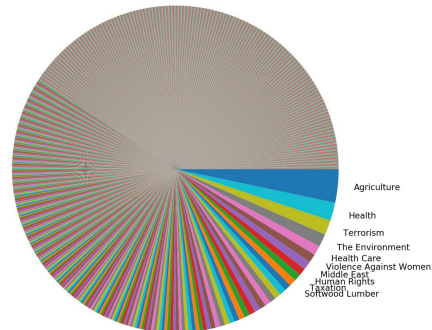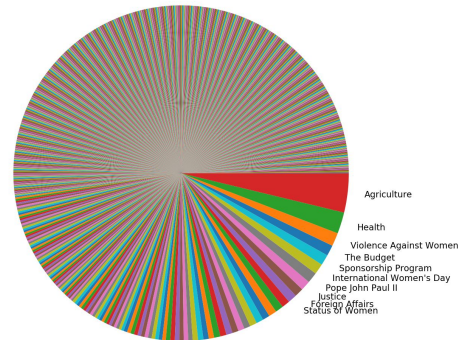
10 most popular topics (1993 - 2005)
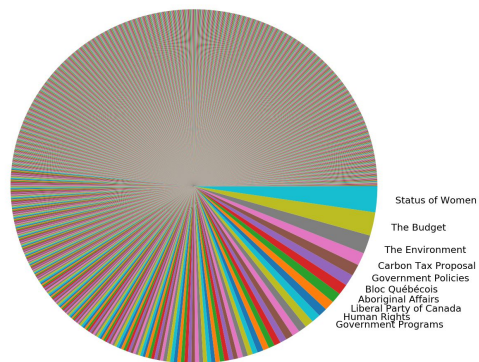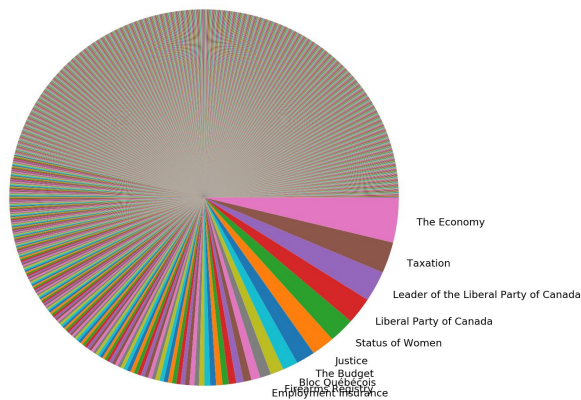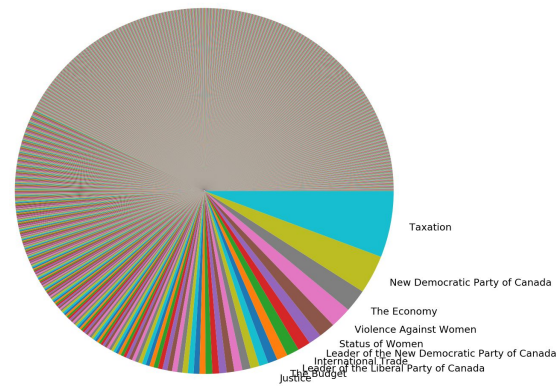

1993 - 1997

1997 - 2000

2000 - 2004

2004 - 2005

10 most popular topics (2005 - 2015)

2005 - 2008

2008 - 2011

2011 - 2015

Topics appear frequent in >2 terms

- Health Care
- Taxation
- The Budget
- The Economy
- The Environment
- Bloc Quebecois

- Status of Women
- Violence Against Women
- Aboriginal Affairs
- Agriculture
- Justice
- Human Rights

Pairs data

- Use 10 most frequent topics, we combined pairs of speeches.
- Sum: 84,752 pairs
- Positive: 53,831 pairs (64%)
- Negative: 30,921 pairs (36%)
- Same party: 56,786 pairs (67%)
- Different party: 27,966 pairs (33%)

Networks to used

Straightforward approaches:

- Rule-based: Sentiment analysis (maybe needs vocabulary)
- Classification (put a separator between

Advanced approaches:

- BERT -> bidirectional training
- Manhattan LSTM (Siamese neural network -> compare output vectors)