Visual Text Analysis Hackathon

Paul Nulty

LSE
24th March 2016

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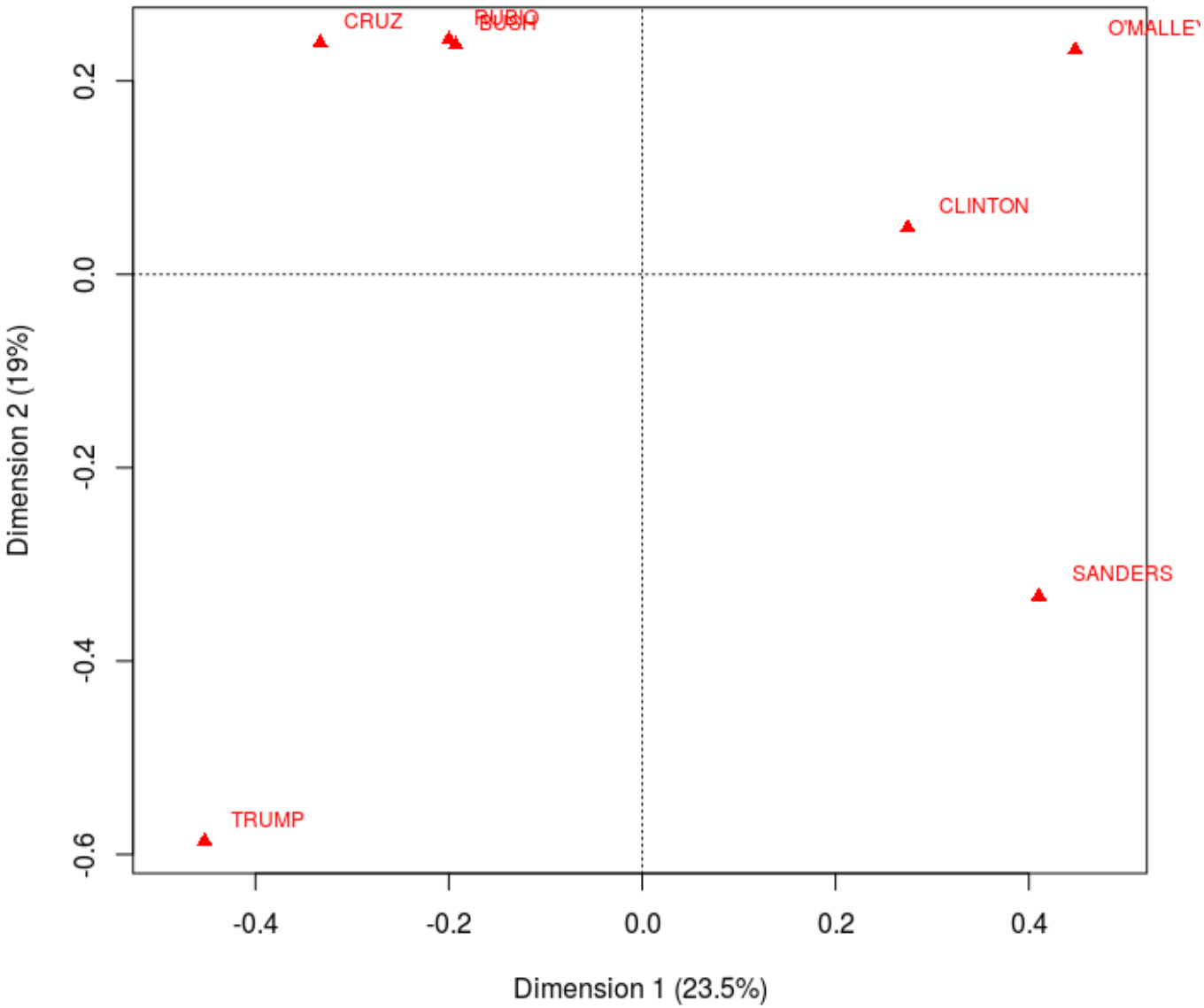
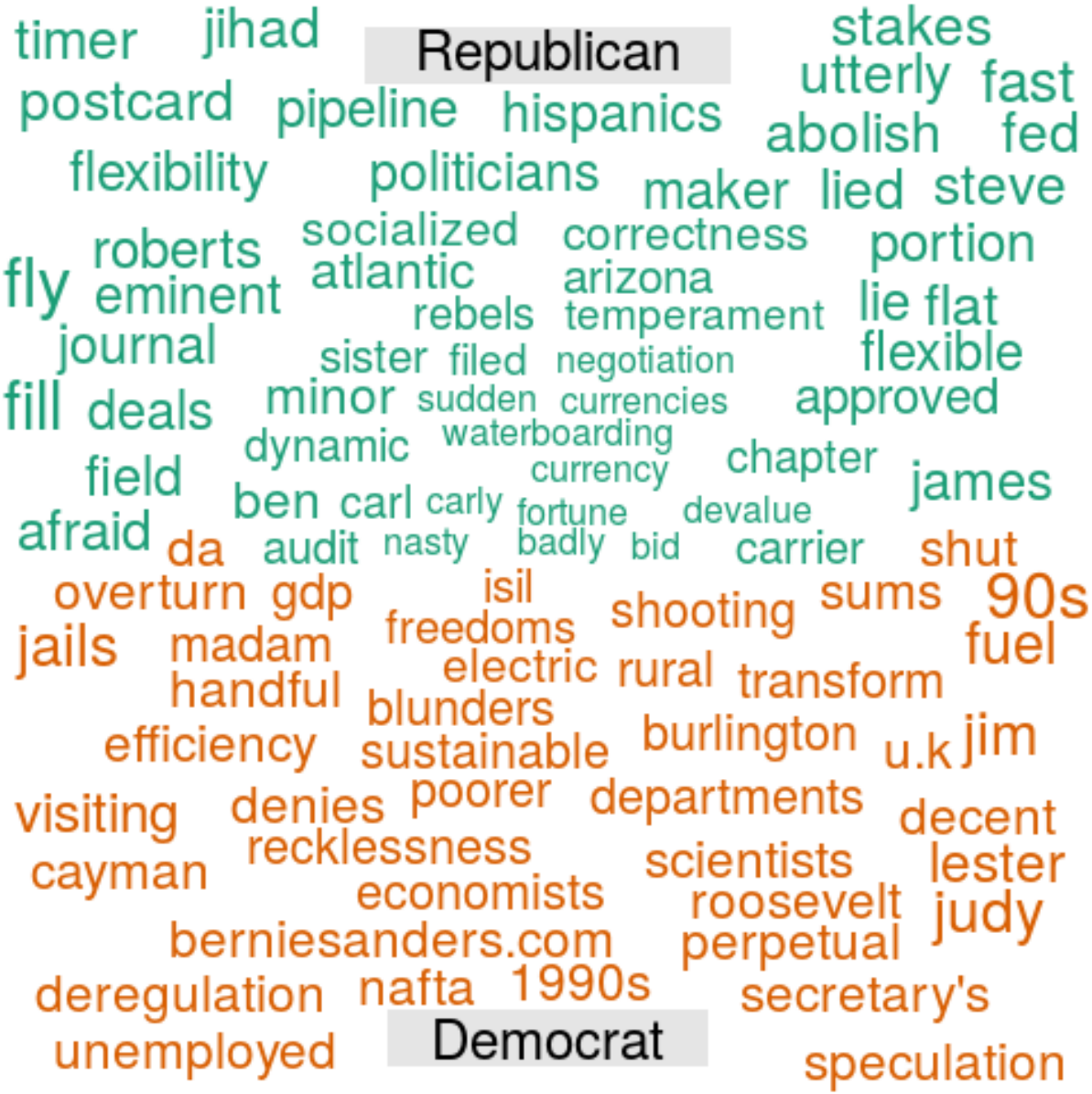
Two dimensional Correspondence Analysis



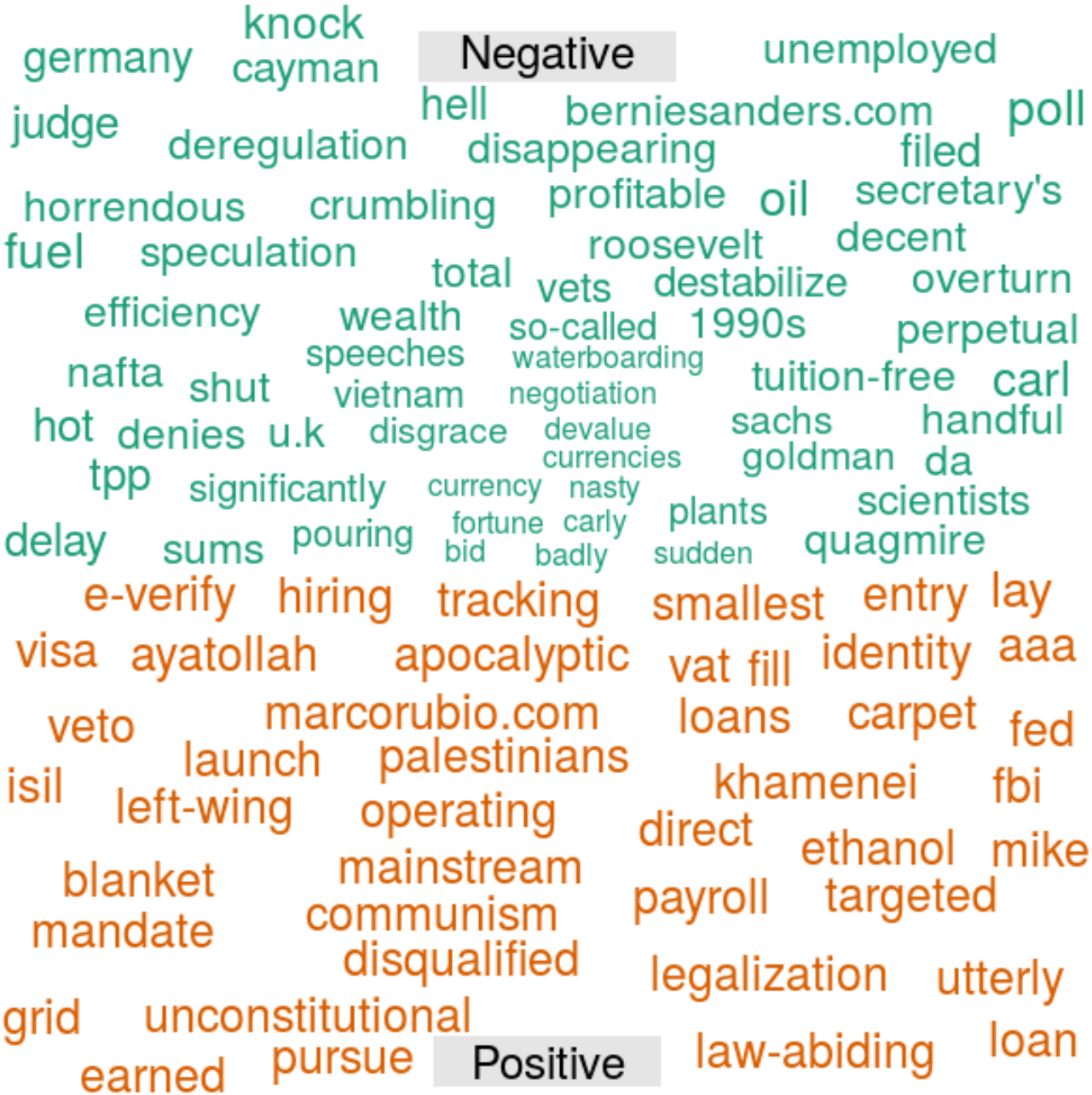
Comparison Cloud

- Treat words with positive, negative weights on a dimension as two documents
- Size: magnitude of difference from average rate of occurrence
- See `?comparison.cloud`

Dimension One



Dimension Two



Alternative: regularised regression, words as predictors

- glmnet elastic net, trigrams, bigrams and unigrams
- Keep features occurring more than five times
- Five-class multinomial logistic model for speaker
- 3195 parameters (approx. 800 nonzero at min CV error), 1470 documents, cross. val. accuracy: 78.7%
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- binomial model for party
- 3195 parameters (approx. 1481 nonzero at min CV error), 1470 documents, cross. val. accuracy: 89.5%

Party regression model

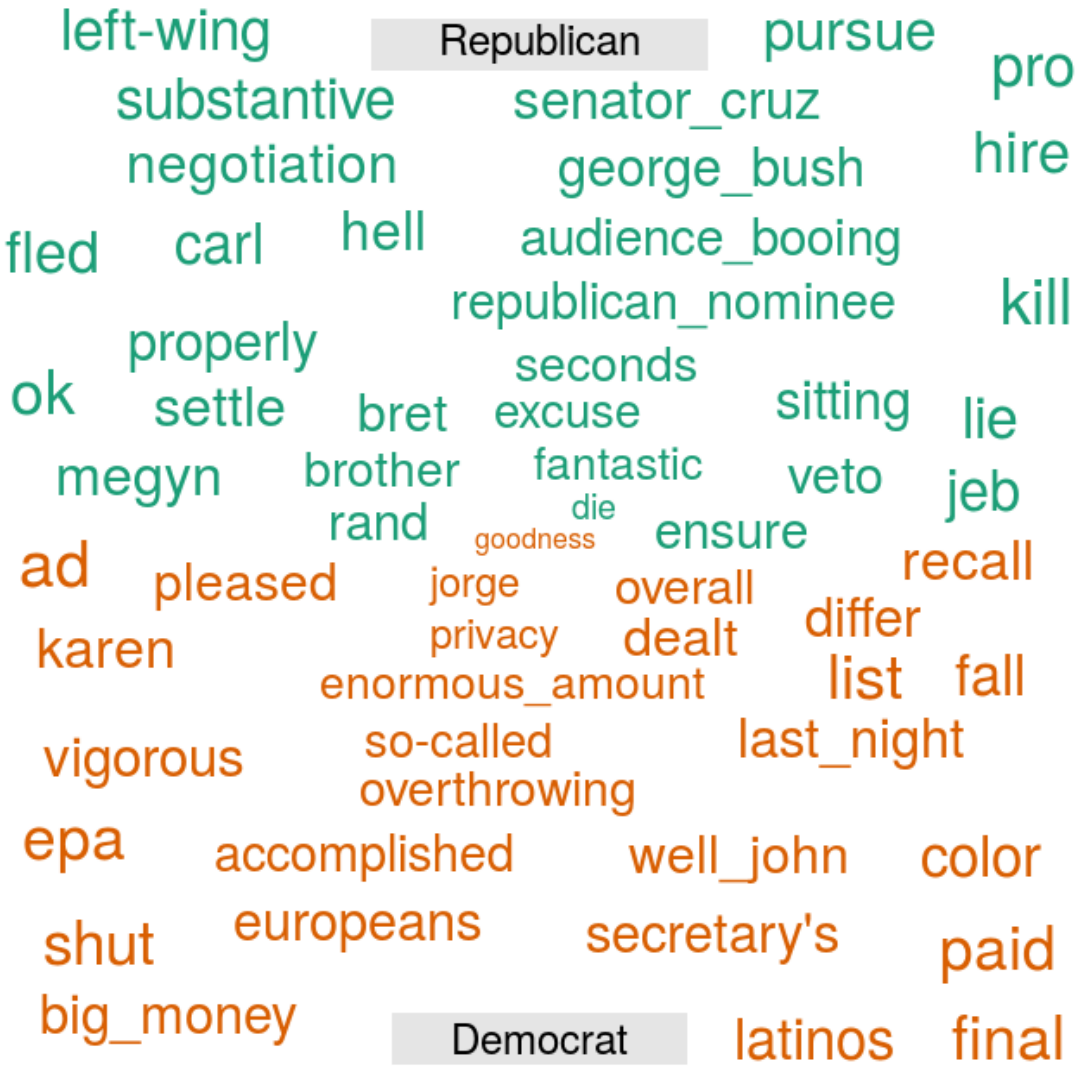

Figure :

Tools

- General R: RStudio, dplyr
- Models: ca, glmnet
- Text: quanteda
- Vis: shiny, wordcloud::comparison.cloud

thank you

- Thank you for your attention
- Code available
  `https://github.com/pnulty/text-hackathon-2016`