

Computerized Text Analysis: Classwork 7

Poisson Scaling of Texts

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The objective of this class exercise is to estimate and examine the results from a Poisson scaling model of texts to estimate the underlying latent “position” in a debate of speeches for and against the Irish budget of 2010.

To complete this exercise you will need to use R (<http://www.r-project.org>) and to install the `austin` library (see Exercise 6 for details).

Instructions:

1. Start R and load the `austin` library using the command:

```
library(austin)
```

2. The debate over the Irish 2010 budget speeches are already available from the `austin` library as a data object (which is somewhat confusingly called “`iebudget2009`”). To access this you simply use the command

```
data(iebudget2009)
```

3. Check the column names (variable names) and size of the dataset you’ve loaded using:

```
colnames(iebudget2009)  
dim(iebudget2009)
```

To set the orientation of the estimation you will need to note which column is Joan Burton (opposition anchor from Labour) and which is Brian Lenihan (Finance Minister).

4. Estimate the wordfish model using the following command. (The column indices in the “`dir`” vector refer to 11 for Burton and 4 for Lenihan.)

```
wfm <- wordfish(iebudget2009, dir=c(11,4))
```

5. Summarize the plot the results:

```
summary(wfm)  
plot(wfm)
```

6. Plot the $\hat{\psi}$ by $\hat{\beta}$ and interpret the plot. Use the following commands:

```
plot(wfm$beta, wfm$psi, type="n")  
text(wfm$beta, wfm$psi, wfm$words)
```