How Does the State Speak of Globalisation? A Quantitative Text-Mining Approach

Justin Murphy

University of Southampton

j.murphy@soton.ac.uk

Abstract

Scholars argue that globalisation is strategically deployed by governments (Hay and Rosamond 2011). This article is the first large-scale quantitative assessment of this argument, using text-mining and machine learning techniques to analyze how the government of the United Kingdom has deployed the term 'globalisation.' Specifically, this article exploits the newly released United Kingdom Government Web Archive to analyze a random sample of more than 60,000 web pages published across the entire UK government web system.

I requested 150,000 web pages, received 67k and about 1k were errors. Thus, the final sample consists of a corpus of dtm

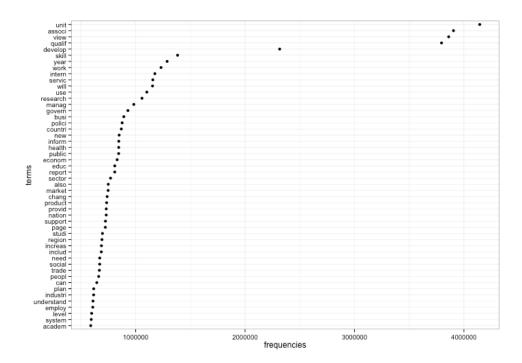


Figure 1: Most frequent terms

Descriptive Statistics

Terms	Globalis	
vision	0.9	
emphasi	0.87	
secondari	0.84	
context	0.83	
legaci	0.82	
implic	0.81	
amongst	0.8	
educ	0.79	
vocat	0.78	
perceiv	0.76	

Correlated terms

Cluster analysis

```
## [1] Cluster 1
## [1] will
                                      committe increas
                  report
                            can
                                                           level
                                                                     offic
  [8] also
                  school
                                      invest
                                                           includ
                                                                     compani
                            need
                                                busi
## [15] govern
                                      industri number
                  transport use
                                                           respons
## [1] Cluster 2
  [1] journal
                  intern
                                      technolog system
                                                           engin
                            manag
                                                                     comput
   [8] titl
                  publish
                            onlin
                                                print
                                                           intellig busi
                                      euro
## [15] innov
                  enterpris electron scienc
                                                sustain
                                                           price
## [1] Cluster 3
    [1] health
                 public
                                   journal nhs
                                                     diseas
                                                              find
    [8] polici
                 author
                                            sourc
                                                     impact
                          avail
                                   articl
                                                               london
## [15] research exclud
                                                     clinic
                          refin
                                   similar
                                            add
## [1] Cluster 4
   [1] research skip
                                                social
                            accesskey esrc
                                                           search
                                                                     page
   [8] studi
                  public
                            econom
                                                scienc
                                                           impact
                                                                     societi
                                      news
## [15] contact
                  output
                            fund
                                      grant
                                                guidanc
                                                           work
## [1] Cluster 5
  [1] eldi
                  websit
                            globalis
                                     topic
                                                home
                                                           develop
                                                                     countri
   [8] inform
                                                           publish
                  guid
                            what
                                      announc
                                                profil
                                                                     site
## [15] job
                                      communiti visit
                  map
                            event
                                                           new
## [1] Cluster 6
```

```
## [1] unit qualif associ view understand skill
```

- ## [7] provid design introduct perform listen write
- ## [13] sport leisur treatment music physic read
- ## [19] techniqu wale
- ## [1] Cluster 7
- ## [1] eldi group develop space communiti member
- ## [7] interest friend help blog search opinion
- ## [13] profil home comment livelihood famili secur
- ## [19] name aid
- ## [1] Cluster 8
- ## [1] oper countri procur organis non specif servic
- ## [8] tel profit project search india result programm
- ## [15] africa support govern china fund aid
- ## [1] Cluster 9
- ## [1] academ year breakdown geograph coverag articl region
- ## [8] pdf labour econom market review countri statist
- ## [15] filter economi trend releas book sep
- ## [1] "Cluster Membership"

##

- ## 1 2 3 4 5 6 7 8 9
- ## 46337 907 2235 5459 3535 2345 2121 779 2696
- ## [1] "Within cluster sum of squares by cluster"
- ## [1] 383.976905 0.009232 18.591247 36.403308 28.291523 4.239123
- ## [7] 14.269600 21.928006 55.741371

Appendix

This is the appendix.

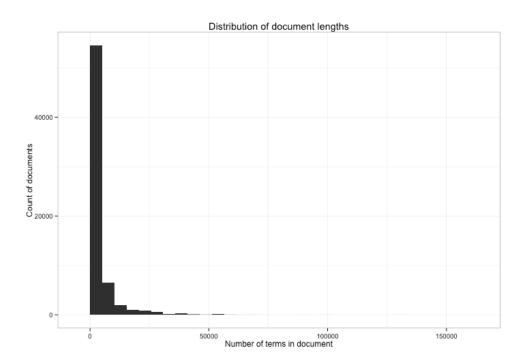


Figure 2: Document lengths

##		Length	Class	Mode
##	cluster	66414	-none-	numeric
##	centers	17640	-none-	numeric
##	totss	1	-none-	numeric
##	withinss	9	-none-	numeric
##	tot.withinss	1	-none-	numeric
##	betweenss	1	-none-	numeric
##	size	9	-none-	numeric

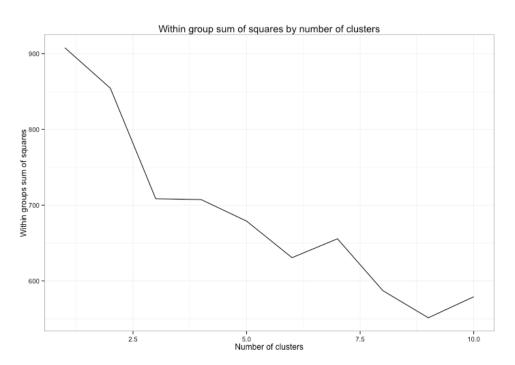


Figure 3: Binwidth

##		Topic 1	Topic 2	Topic 3	Topic 4	Topic 5
##	[1,]	"skill"	"school"	"globalis"	"financi"	"product"
##	[2,]	"develop"	"use"	"websit"	"market"	"per"
##	[3,]	"educ"	"educ"	"global"	"intern"	"year"
##	[4,]	"globalis"	"teacher"	"eldi"	"globalis"	"countri"
##	[5,]	"countri"	"ict"	"polici"	"capit"	"price"
##	[6,]	"dfid"	"can"	"new"	"bank"	"world"
##	[7,]	"also"	"learn"	"home"	"develop"	"cost"

```
[8,] "train"
                    "dfid"
                                 "unit"
                                                "economi"
                                                            "market"
    [9,] "sector"
                    "project"
                                 "europ"
                                                "global"
                                                            "industri"
## [10,] "research" "student"
                                 "relationship" "econom"
                                                            "export"
## [11,] "need"
                    "technolog" "intern"
                                                "risk"
                                                            "increas"
## [12,] "cultur"
                    "peopl"
                                 "busi"
                                                "countri"
                                                            "trade"
## [13,] "nation"
                                                            "cent"
                    "work"
                                 "inform"
                                                "increas"
## [14,] "econom"
                    "communiti" "trade"
                                                "growth"
                                                            "import"
                                                "system"
## [15,] "world"
                    "activ"
                                 "countri"
                                                            "develop"
## [16,] "global"
                                                will"
                    "experi"
                                 "world"
                                                            "govern"
## [17,] "poverti"
                    "comput"
                                 "state"
                                                "polici"
                                                            "period"
## [18,] "women"
                    "develop"
                                 "tel"
                                                "servic"
                                                            "even"
## [19,] "increas"
                    "also"
                                 "work"
                                                "benefit"
                                                            "exchang"
                    "teach"
                                 "secur"
                                                            "howev"
## [20,] "privat"
                                                "invest"
##
         Topic 6
                    Topic 7
                                Topic 8
                                           Topic 9
##
    [1,] "pay"
                    "develop"
                               "develop"
                                           "develop"
    [2,] "plus"
                                "countri"
                                           "impact"
                    "relat"
##
    [3,] "fair"
                    "skill"
                                "trade"
                                           "research"
##
    [4,] "intern"
                    "strategi" "intern"
                                           "agricultur"
##
    [5,] "institut" "level"
                                "govern"
                                           "increas"
##
    [6,] "concern" "govern"
                                "work"
                                           "servic"
##
    [7,] "commerc" "globalis" "will"
                                           "report"
    [8,] "encourag" "countri"
                               "polici"
                                           "product"
    [9,] "certain"
                    "term"
                                "world"
                                           "rural"
## [10,] "popul"
                    "polici"
                                "peopl"
                                           "food"
## [11,] "import"
                    "nation"
                                "import"
                                           "use"
```

```
## [12,] "cent"
                    "market"
                               "poverti" "also"
## [13,] "constitu" "requir"
                              "poor"
                                          "may"
## [14,] "assur"
                    "key"
                              "globalis" "health"
## [15,] "programm" "global"
                              "effect"
                                          "popul"
## [16,] "public"
                    "educ"
                               "invest"
                                          "water"
## [17,] "accord"
                                          "migrat"
                    "two"
                               "price"
## [18,] "social"
                    "differ"
                               "inflat"
                                          "area"
                                          "growth"
## [19,] "parti"
                    "state"
                               "can"
## [20,] "term"
                    "competit" "increas" "poverti"
```

References

Hay, Colin, and Ben Rosamond. 2011. "Globalization, European Integration and the Discursive Construction of Economic Imperatives." *dx.doi.org.libproxy.temple.edu* 9(2): 147–67. http://www.tandfonline.com/doi/abs/10.1080/13501760110120192.