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Climate Change Politics and Machine Learning

What we know...

What we don’t...

Why?

ExxonMobil &
Koch Family
Foundations

Climate
Contrarian
Movement

RQs and Method

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1. Which orgs exert the most power in the network?

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2. What is thematic content of their texts?

RQs and Method

1. Which orgs exert the most power in the network?

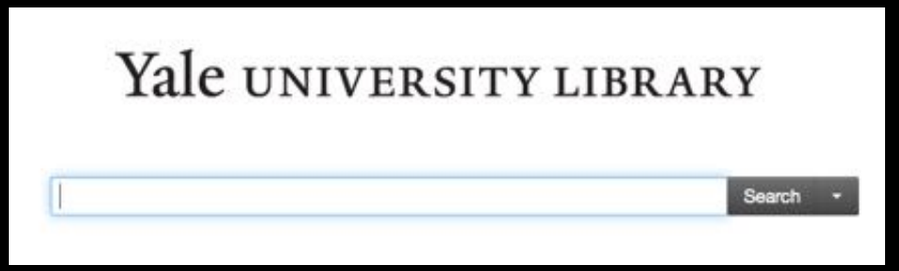
2. What is thematic content of their texts?

3. Which organizations' texts most influence media & politics?

A Quick Detour about Data

From analog to digital

Digitizing information



"Your recent Amazon purchases, Tweet score and location history makes you 23.5% welcome here."

Is it useful to you?

"I can prove it or disprove it! What do you want me to do?"

Data

Data

1. Social Network

164 Organizations

4,556 Individual Actors

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*Donations from
EM or KFF

Data

1. Social Network

164 Organizations

4,556 Individual Actors

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EM or KFF

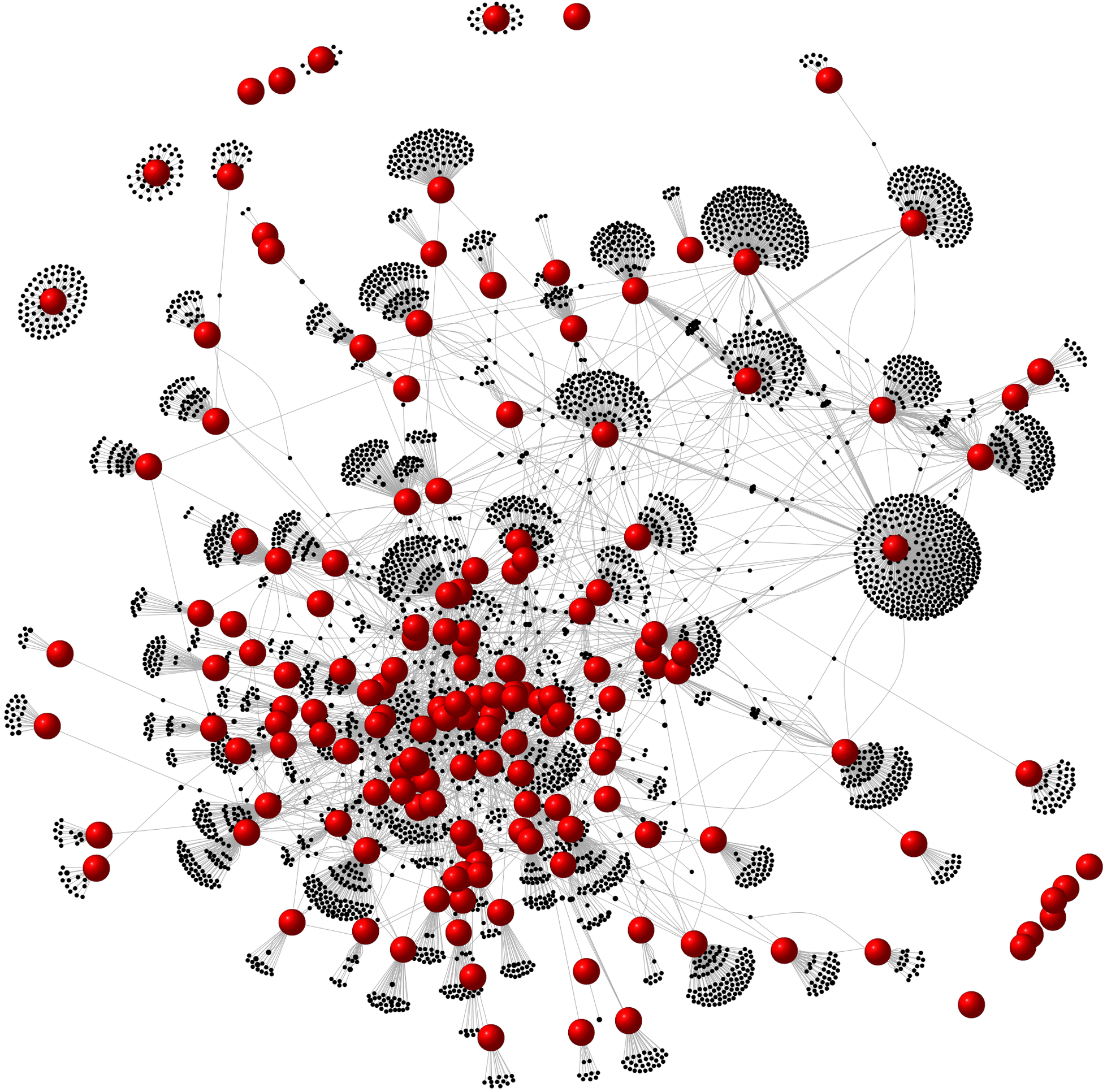
2. Written Text

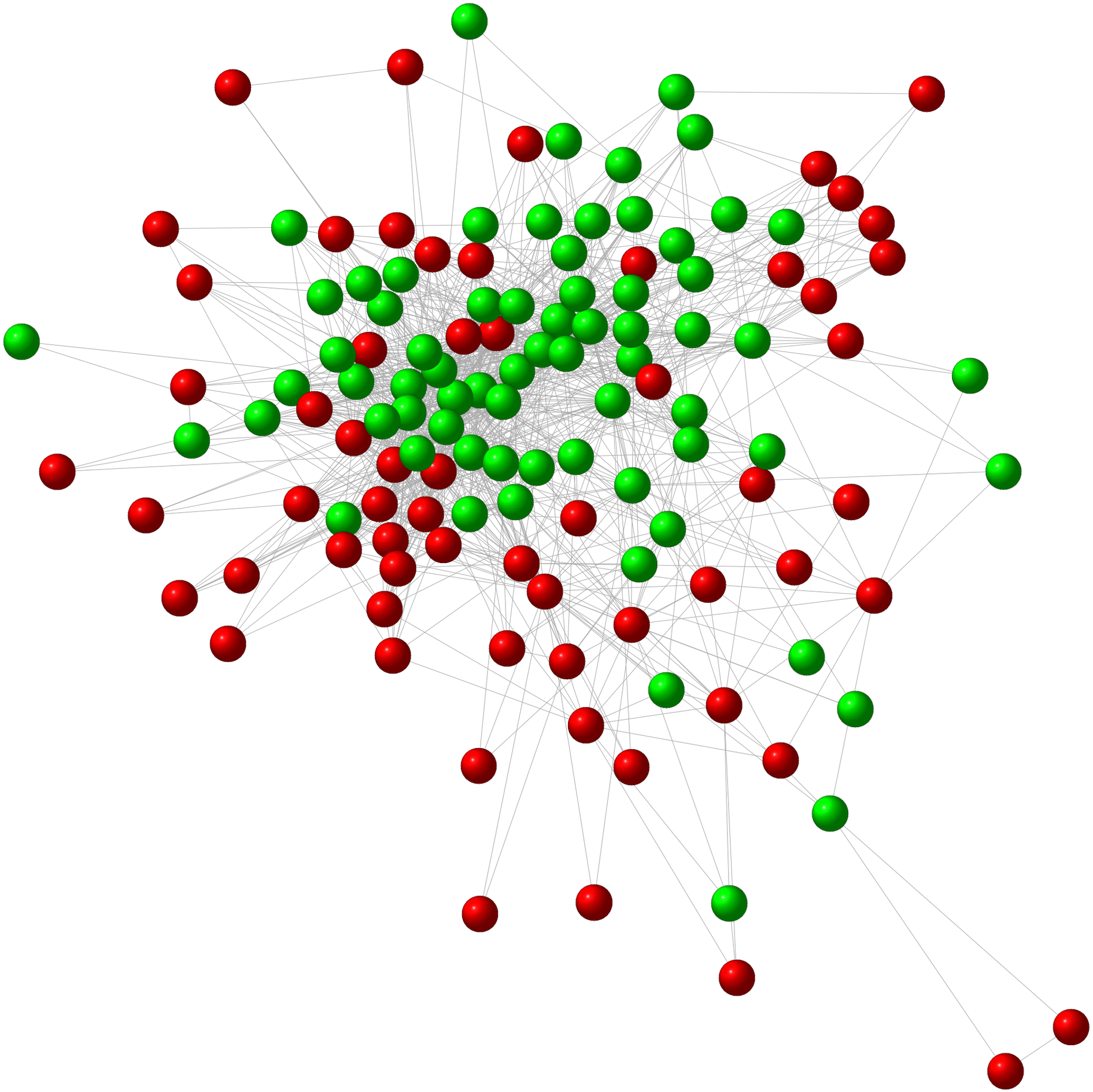
164 Organizations

40,785 Texts
(1993-2013)

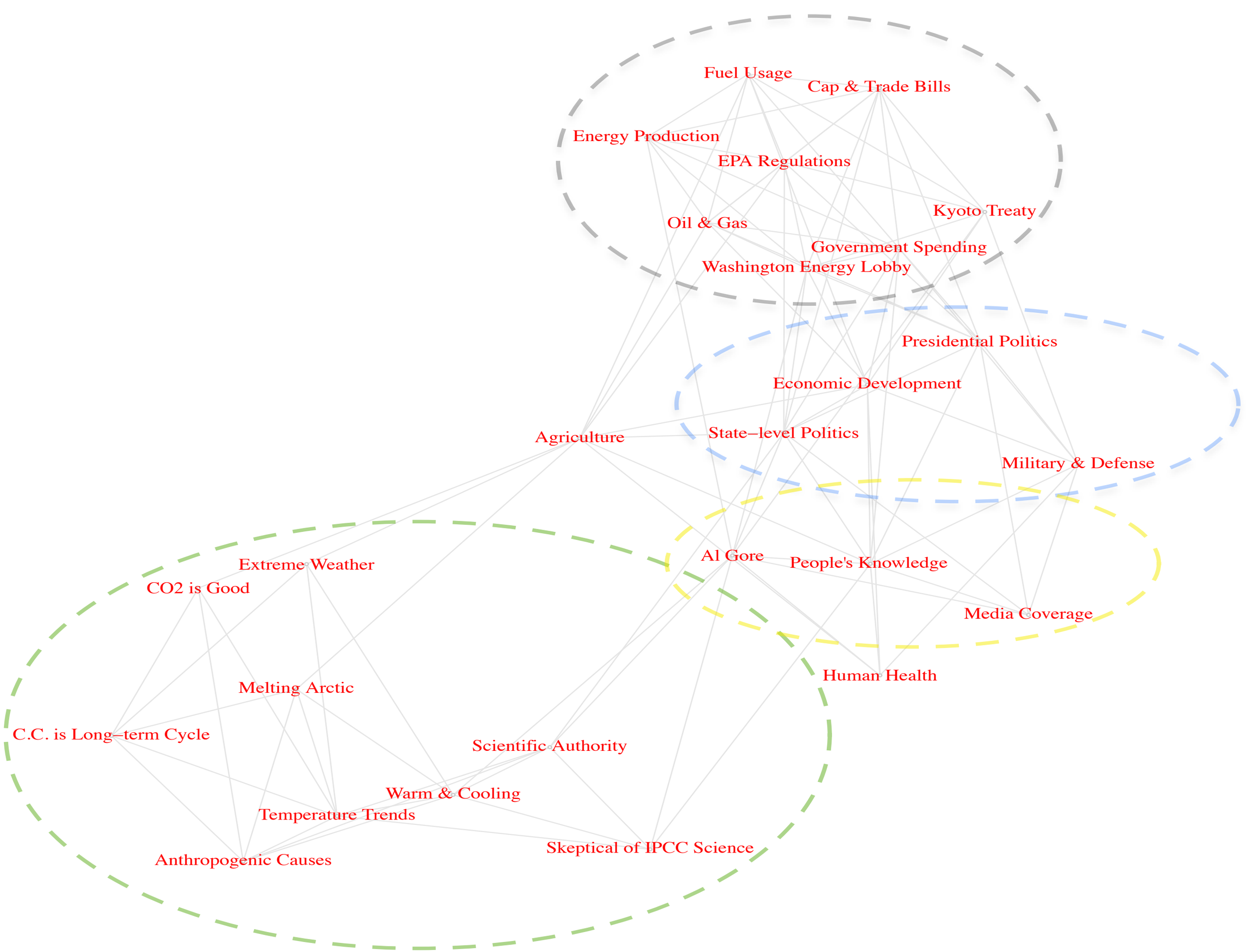
Benefits of this approach...

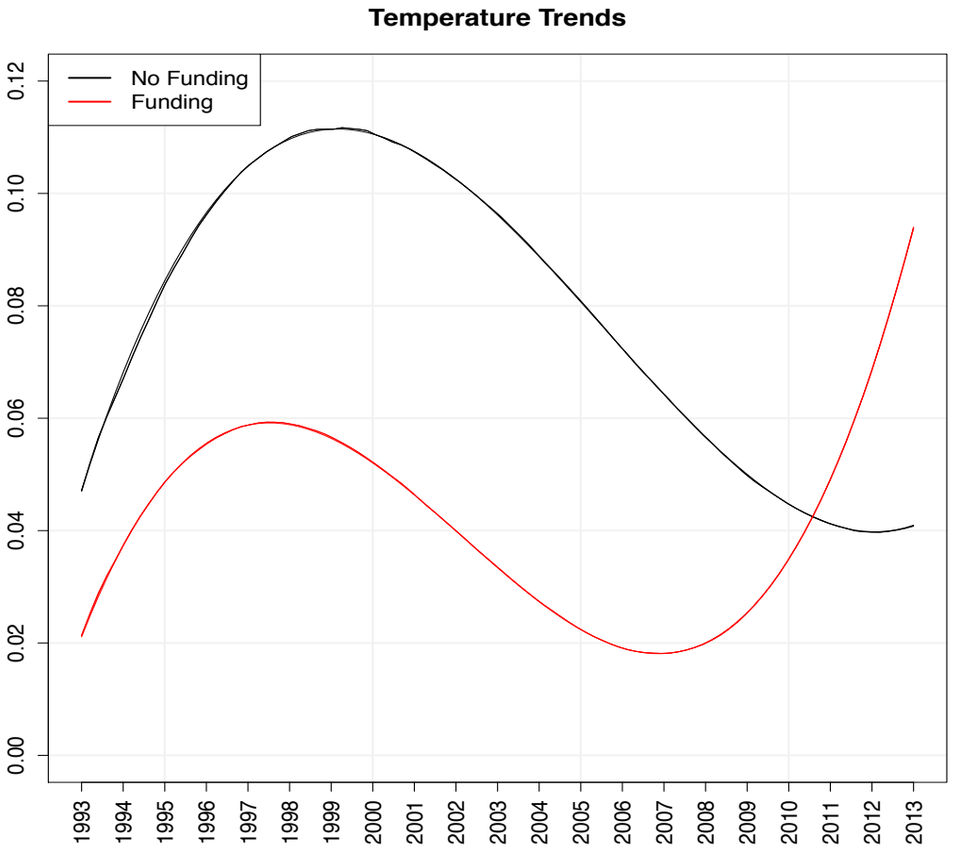
Results: Contrarian Network

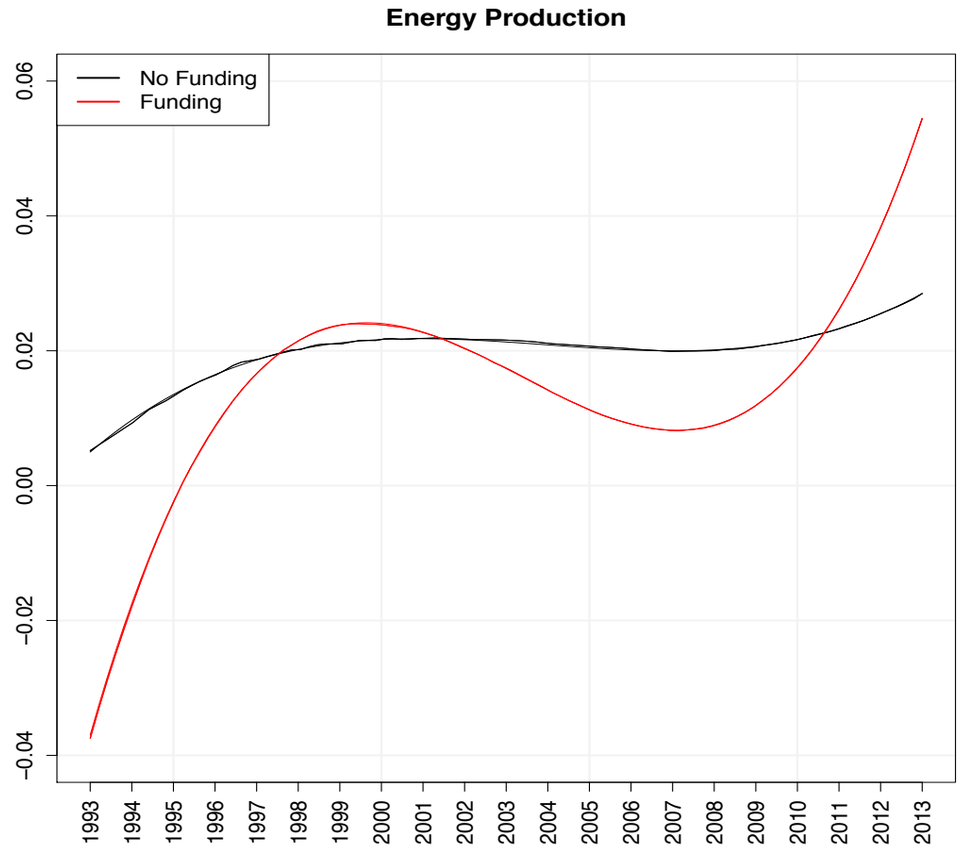


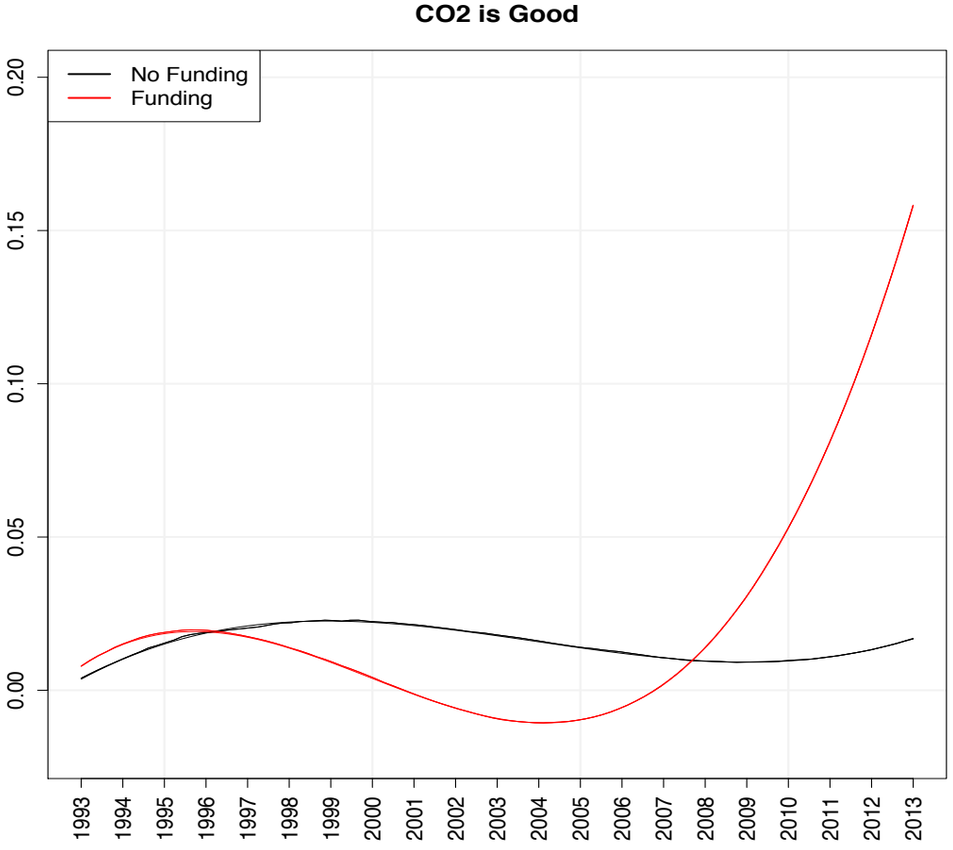


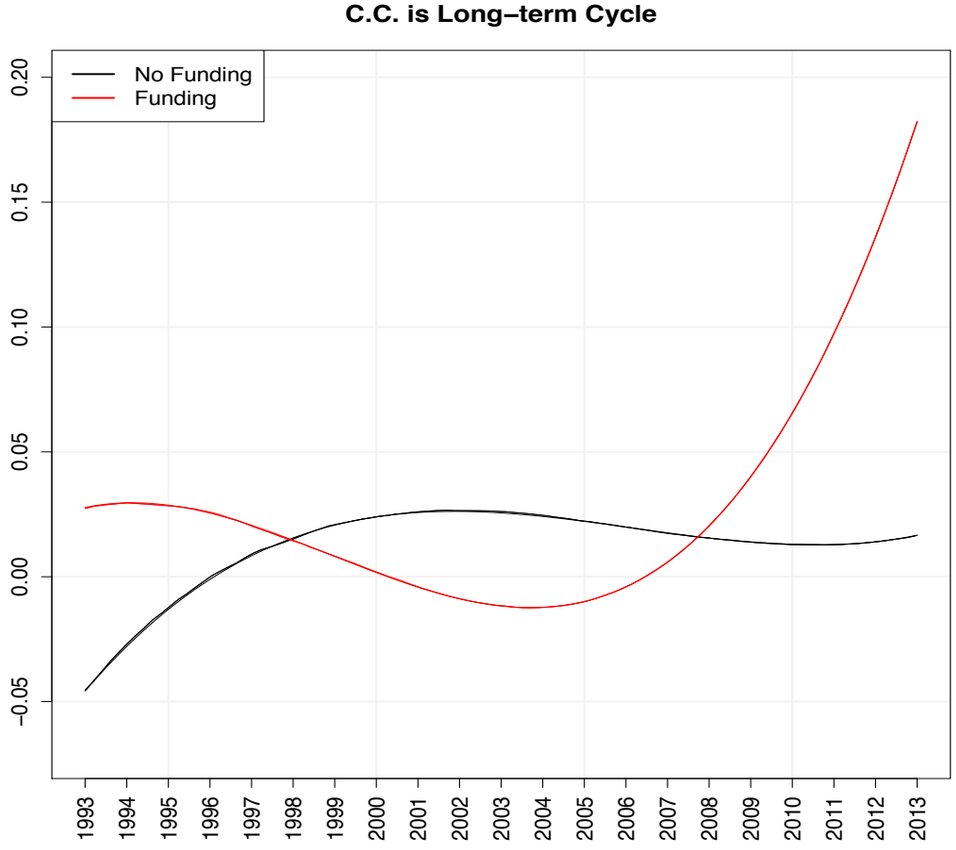
Results: Text Analysis


Fuel Usage
Cap & Trade Bills
Energy Production
EPA Regulations
Kyoto Treaty
Oil & Gas
Government Spending
Washington Energy Lobby
Presidential Politics
Economic Development
Agriculture
State–level Politics
Military & Defense
Al Gore
People's Knowledge
Media Coverage
Human Health
Extreme Weather
CO2 is Good
Melting Arctic
C.C. is Long–term Cycle
Scientific Authority
Warm & Cooling
Temperature Trends
Skeptical of IPCC Science
Anthropogenic Causes

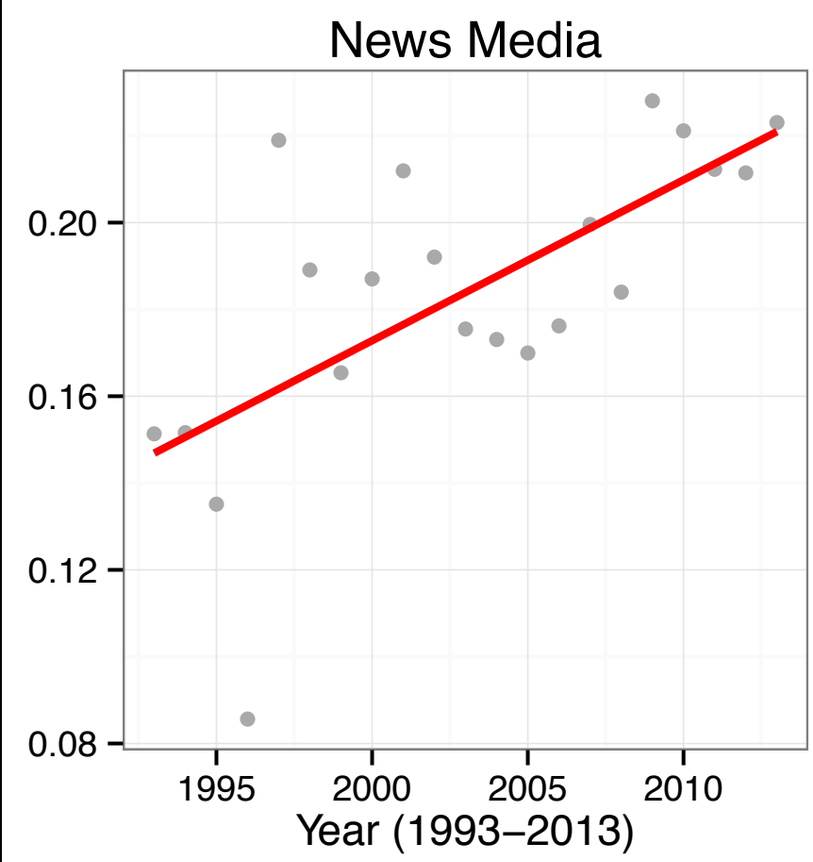

Temperature Trends
No Funding
Funding
0.00
0.02
0.04
0.06
0.08
0.10
0.12
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013

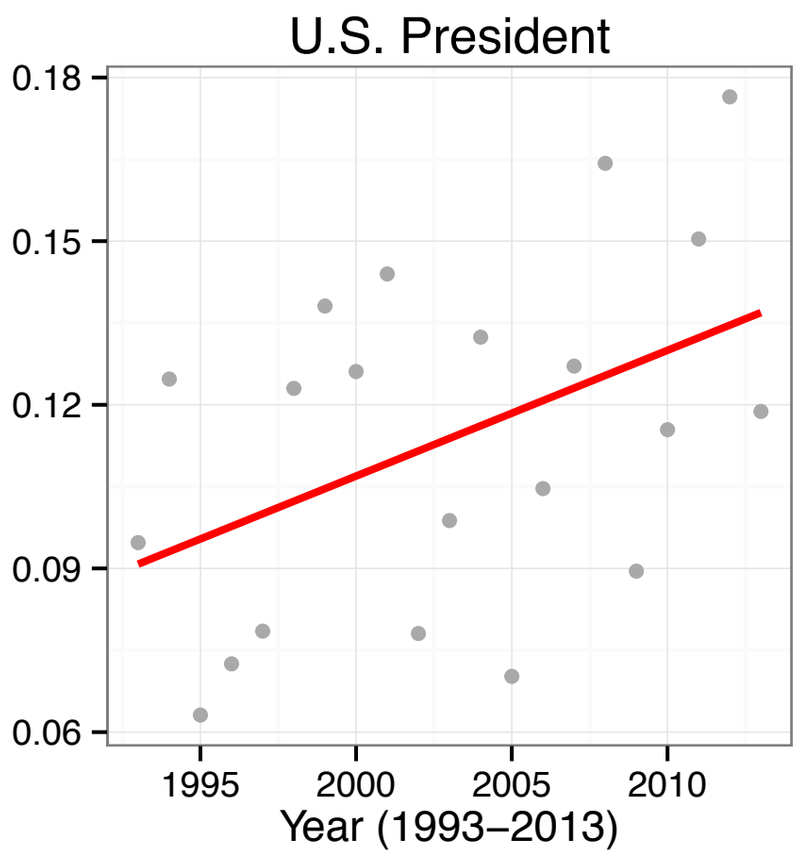

Energy Production
No Funding
Funding
−0.04
−0.02
0.00
0.02
0.04
0.06
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013

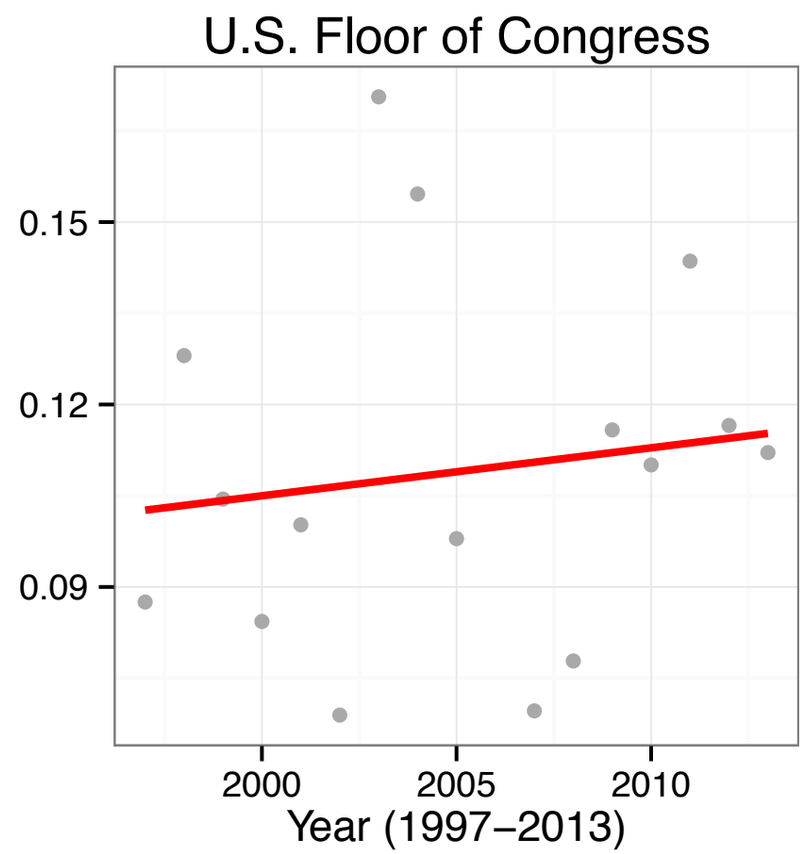

CO2 is Good
No Funding
Funding
0.00
0.05
0.10
0.15
0.20
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013


C.C. is Long−term Cycle
No Funding
Funding
−0.05
0.00
0.05
0.10
0.15
0.20
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013

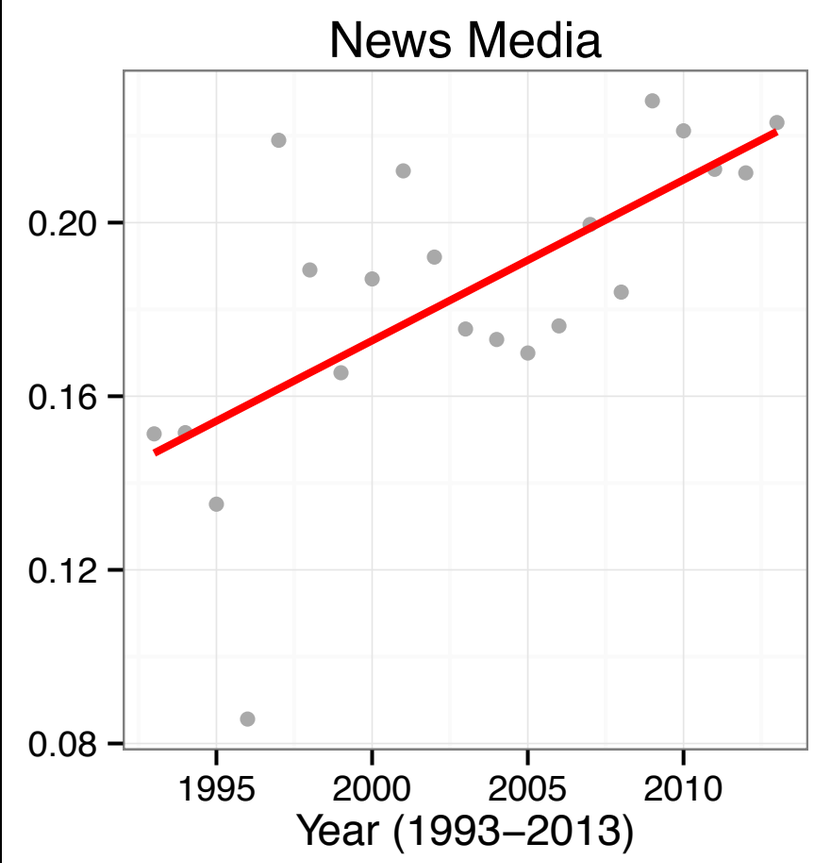
Semantic Presence in Media & Politics

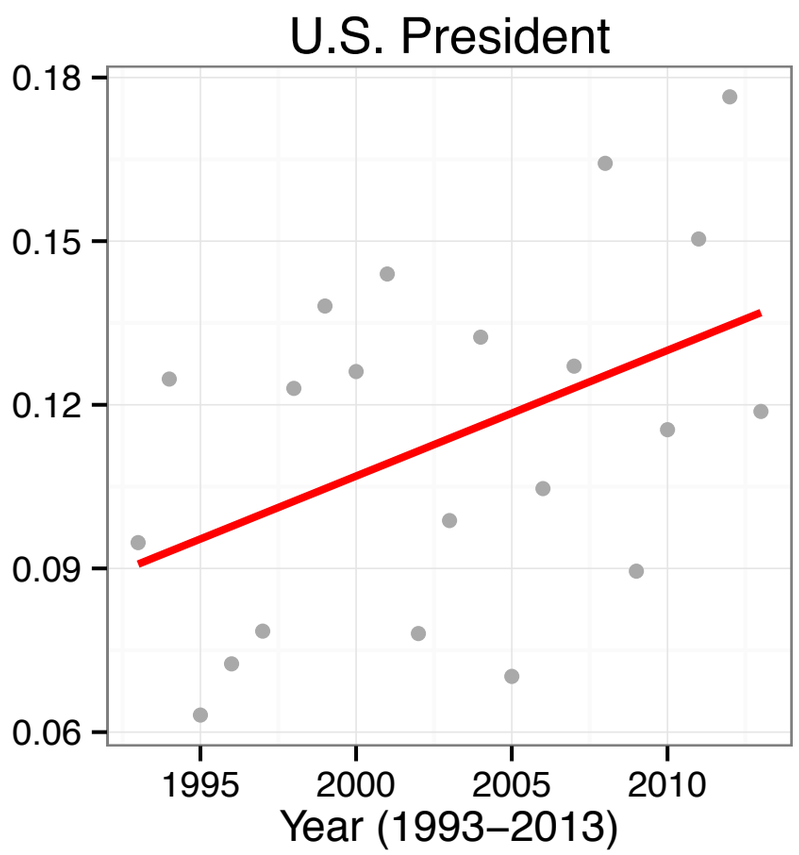


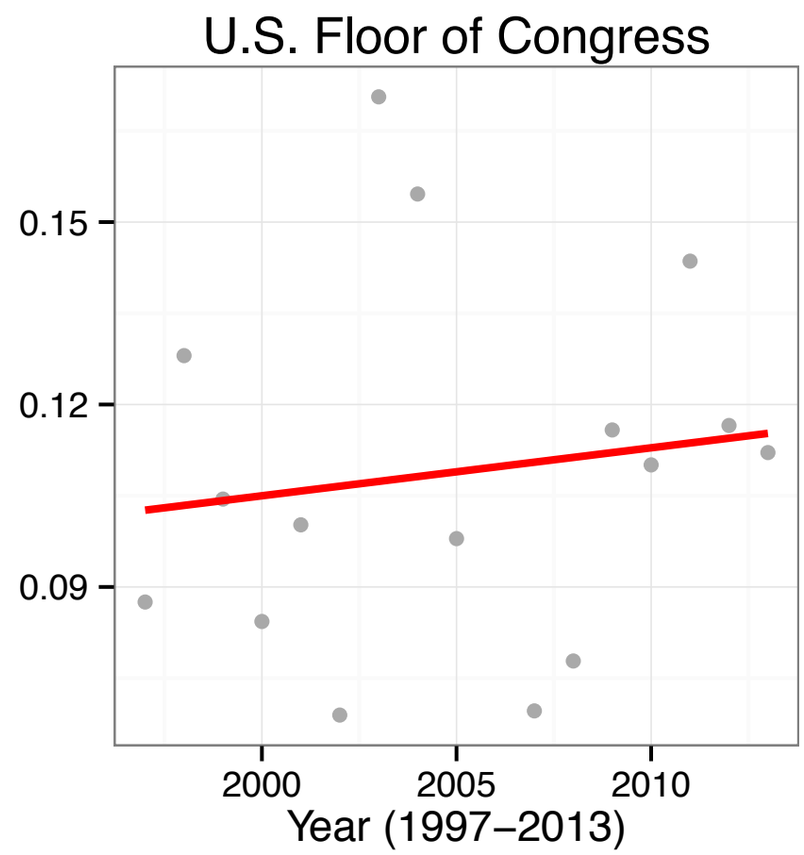




Semantic Presence in Media & Politics







Orgs with Corporate Donations (**p<.001)

Contrarian Orgs who received funding:

1. are more central in the network

2. emphasized different thematic messages

3. were more semantically influential in media

Implications

Thanks!

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