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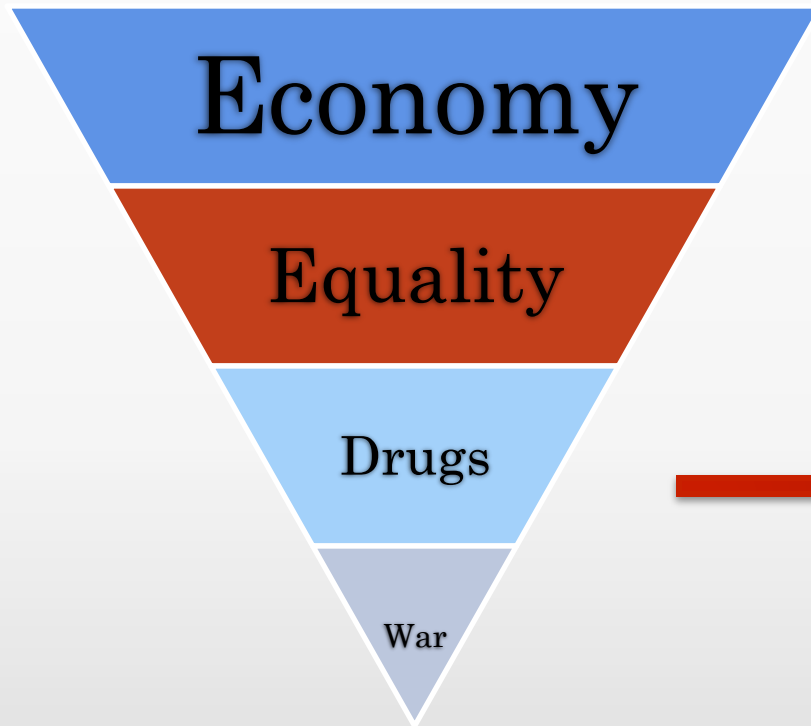
Network Issue Agendas On Twitter During The 2012 U.S. Presidential Election

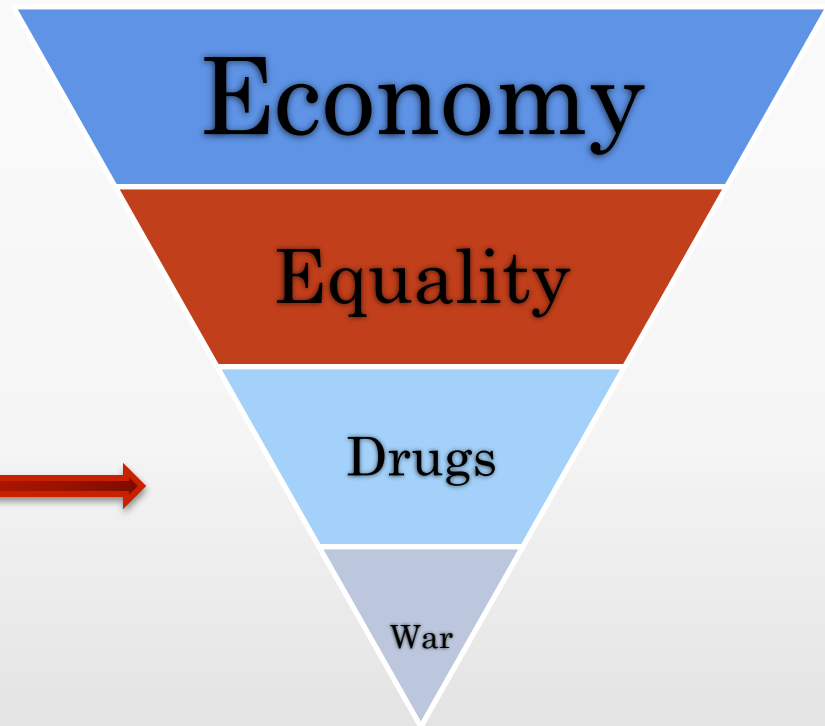CHRIS J. VARGO, LEI GUO, DR. MAXWELL MCCOMBS
AND DR. DONALD LEWIS SHAW

AGENDA SETTING, LEVEL 1

Time1/Media

Time2/Public

Economy

Equality

Drugs

War

Economy

Equality

Drugs

War

NETWORK AGENDA SETTING MODEL

- The salience of network relationships among objects/attributes can be transferred from one agenda to another.
  - McCombs' new book designates this the "3rd level of agenda-setting theory."
- News media not only tell us what to think about and how to think, they might also be capable of telling us what and how to _associate_.
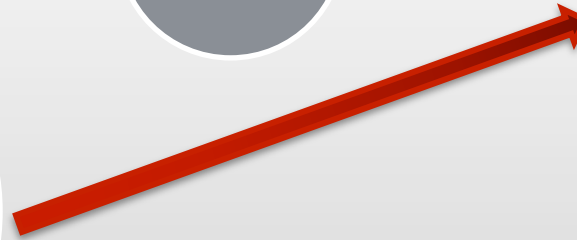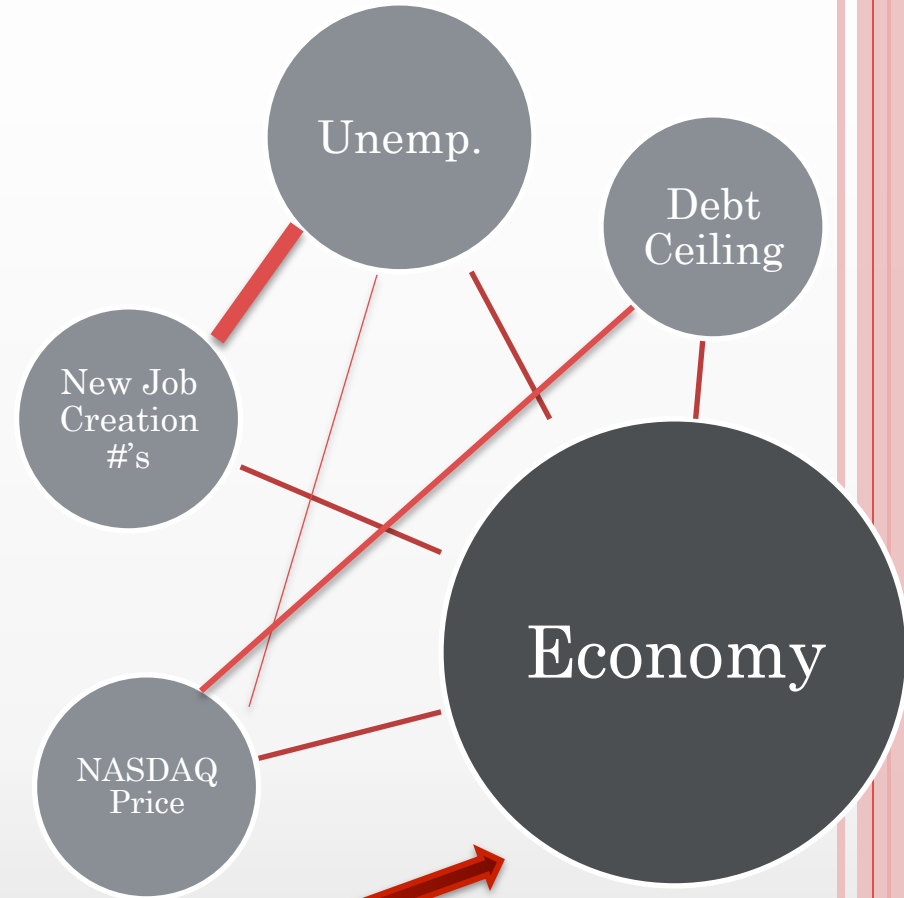
AGENDA SETTING, LEVEL 3
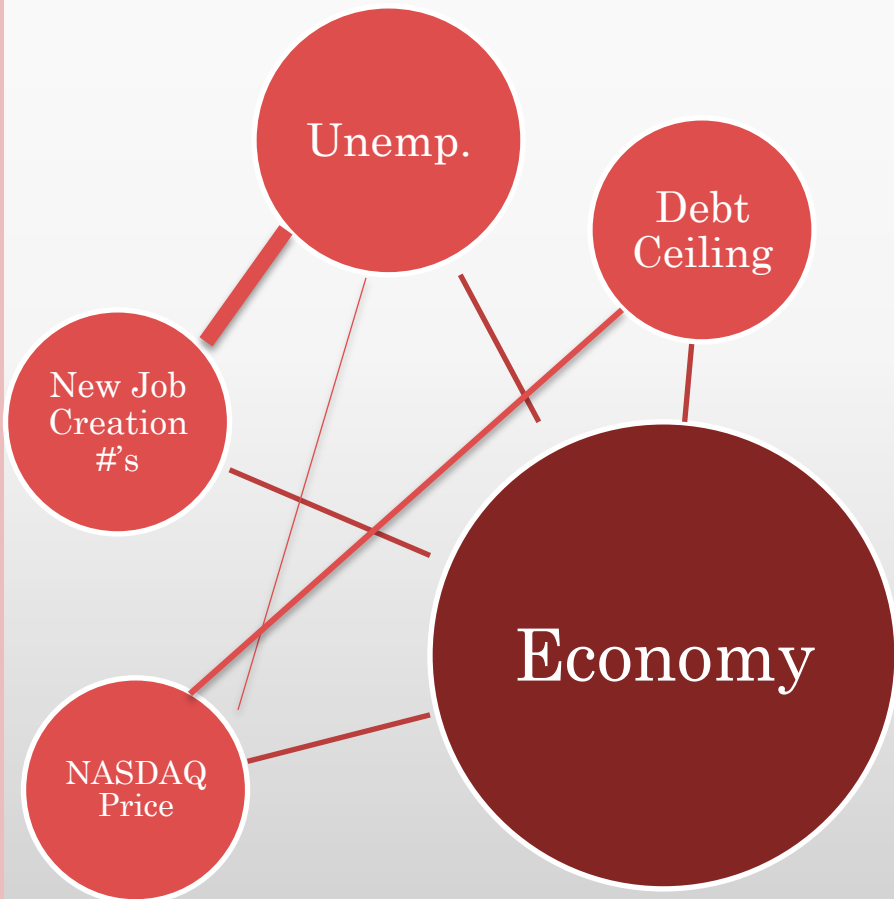
Public attribute network

Media attribute network

TEST GROUPS: MEDIA (AGENDAMELDING)

Vertical Media

#1

#2

Horizontal Media (Democratic) → Specific Public

- MSNBC, Hosts & Talk Shows
- Hardball, Maddow, John Stewart, Anderson Cooper..
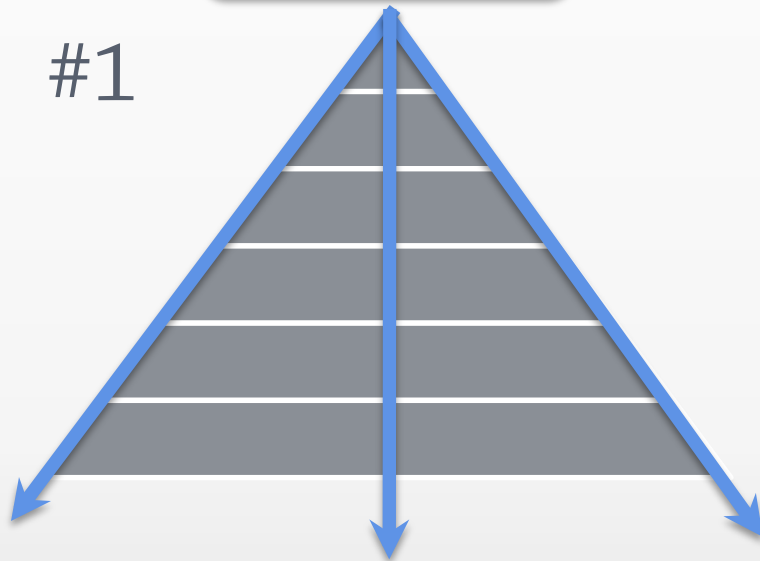
#3

Horizontal Media (Republican) → Specific Public

- FoxNews, Hosts & Talk Shows
- Rush Limbaugh, Glenn Beck, O'Reilly, Hannity..
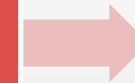
General Public

- CBS, NBC, CNN, PBS..
- USA Today, NYT, WSJ, US Weekly..
- Denver Post, Pittsburgh Post Gazette..

TEST GROUPS: CANDIDATE SUPPORTERS

#4

#5

- Users that Tweeted <12 times about one candidate, and not another were subjected to a sentiment analysis
- Average sentiment was calculated for each user
- Average was subjected to a one-way t-test to see if sentiment was significantly greater than 0 at the .10 level
  - DF = 1 - # of Tweets broadcasted about candidate
- 2,875 Obama supporters found
- 2,457 Romney supporters found

METHOD-NETWORK ANALYSIS

- Step 1: Create a matrix for each group

	A	B	C	D	E	F	G	H
A	0	1331	669	634	241	650	499	137
B	1331	0	786	724	264	484	568	45
C	669	786	0	545	222	549	278	15
D	634	724	545	0	141	417	244	15
E	241	264	222	141	0	138	130	17
F	650	484	549	417	138	0	205	11
G	499	568	278	244	130	205	0	29
H	137	45	15	15	17	11	29	0

A. Economy
B. Foreign Policy
C. Individual Liberties
D. Federal Programs
E. Immigration
F. Education
G. Environment
H. Big Government

METHOD-NETWORK ANALYSIS

○ Step 2: Compare matrices

Quadratic Assignment Procedure (QAP) Analysis

RESULTS

QAP Correlations: Tweets about Obama

	Obama supporters	Vertical Media	Democratic media	Republican Media
Obama supporters				
Vertical Media	0.756*			
Democratic media	0.719*	0.912**		
Republican Media	0.861*	0.916**	0.889**	

Notes: 1. *p<0.01; 2. **p<0.001

RESULTS

QAP Correlations: Tweets about Romney

	Romney supporters	Vertical Media	Democratic media	Republican Media
Romney supporters				
Vertical Media	0.906*			
Democratic media	0.843*	0.945**		
Republican Media	0.892*	0.974**	0.924**	

Notes: 1. *p<0.01; 2. **p<0.001
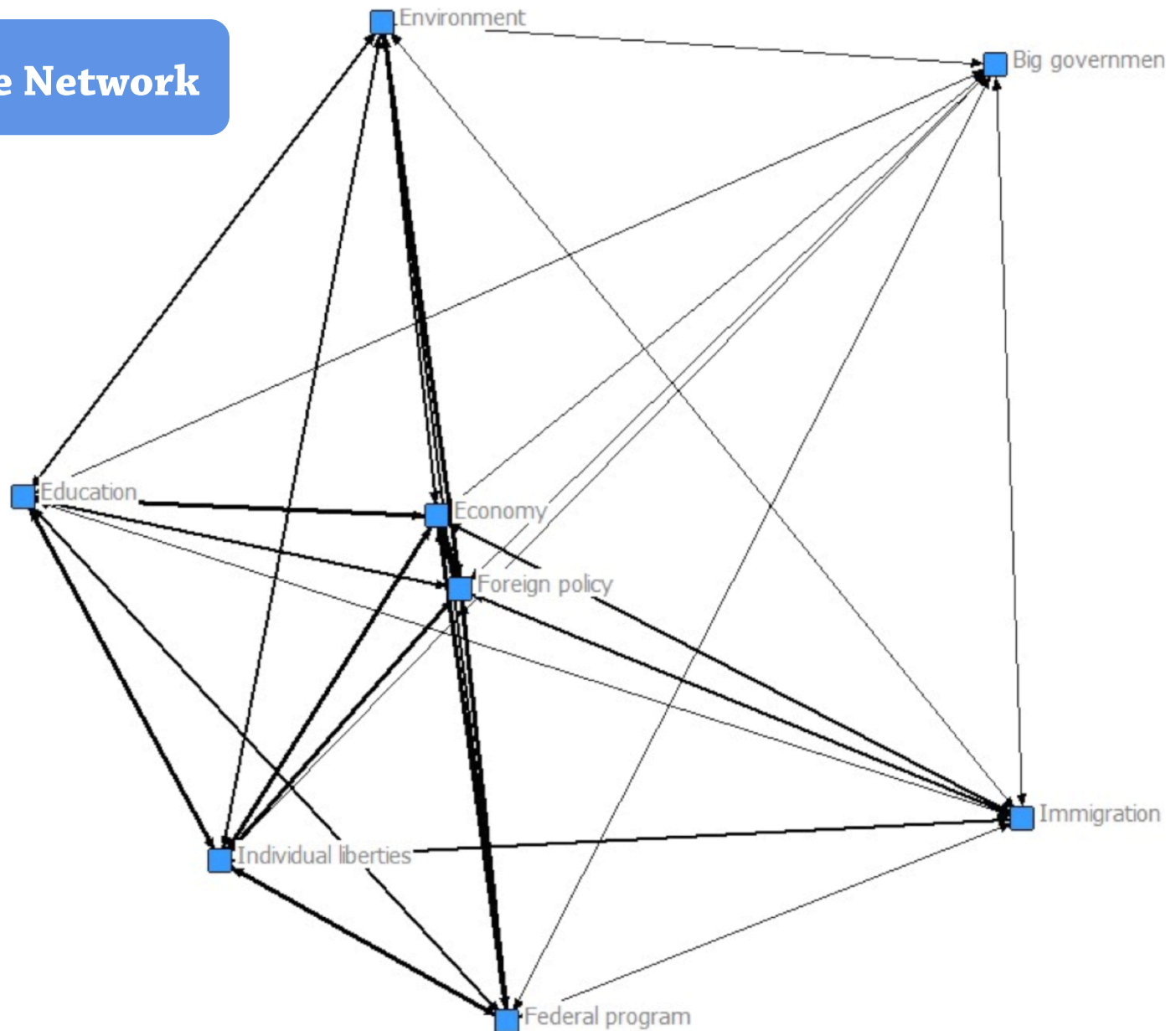
Obama Issue Network

Romney Issue Network
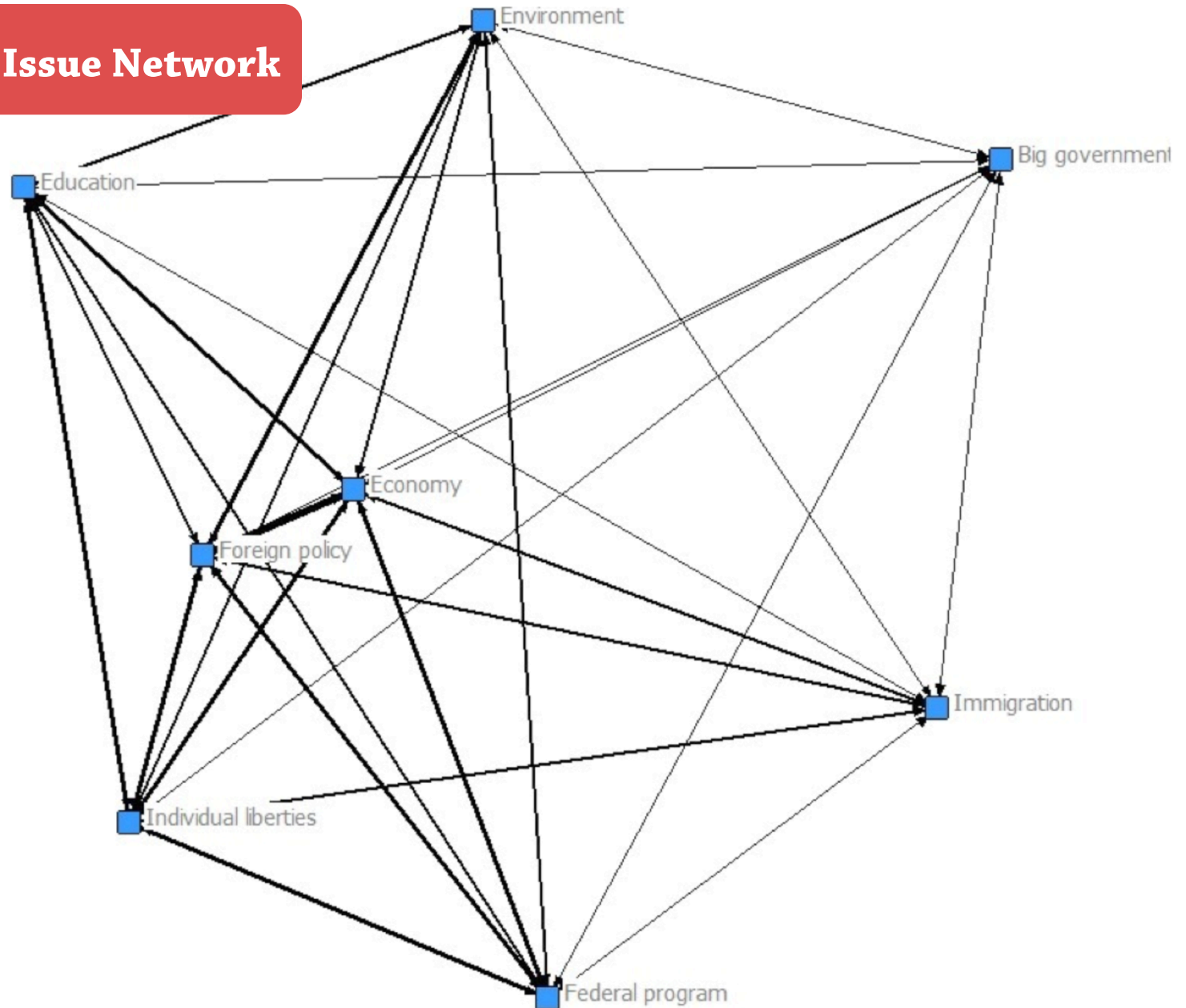
H1A&B: CONCLUSIONS

- The daily network issue agenda of (a) Obama supporters and (b) Romney supporters is positively correlated with the vertical media's network issue agenda.

- Yes. All media & supporters were highly correlated.

- It really seems that the topical focus was very consistent across all five groups.

H2a&b: Conclusions

- The daily network issue agenda of (a) Obama supporters and (b) Romney supporters correlates more strongly with the network issue agenda of politically compatible horizontal media (a. Democrat, b. Republican) than with the network issue agenda of horizontal media with opposing views.

- H2a was not supported.

- H2b was supported, but the difference was small.

  - Romney supporters appeared to align more with republican media than Democratic media

H3A&B: CONCLUSIONS

- The daily network issue agenda of (a) Obama supporters and (b) Romney supporters correlates more strongly with the network issue agenda of their politically compatible horizontal media (a. Democrat, b. Republican) than with the network issue agenda of the vertical media.

- H3a & H3b were not supported.

- Overall, very little support for "selective exposure."

CONCLUSIONS

- The amount of coverage on issues, and how those issues were talked about in combination with each other appears to be very similar across all our groups.
    - Strong AS1 & AS3 effects.
- For topical focus, it appears that even avid supporters and polarized media were talking about the same combinations of issues.

GOING BEYOND…

- Additional cross-lagged analysis shows that Vertical media appeared to control the agenda early, while horizontal media controlled it later in the election.
  - Relationships get complex as the election goes on, ebbing and flowing between all groups.
- A study of attributes would likely yield bigger differences amongst groups.