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# Agenda Trending: An Examination of Agenda Setting and Producer Media

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# Setting Agendas, Trends

- o Since the seminal agenda-setting article of McCombs and Shaw (1972), much has been made of the ability of media content to inform audiences what to think about.
- o This theoretical approach of media effects research has been analyzed at different levels and codified into typologies but agenda setting is now being transformed by the dramatic growth of audiences that are simultaneous media users and producers.
- o Indeed, the rise of the “produser” (Bruns, 2009) has altered conceptions of where media agendas begin and end in relation to the public agenda.



# Elite $\leftrightarrow$ SNS ?

- o The study reported here has begun to track and compare the agendas of two leading traditional (print and broadcast) media outlets as well as the most common trending topics on the two most popular social networking sites (SNSs).
- o This study is thus positioned to determine to what extent traditional media sets the agenda for social media.
- o Previous research (Meraz, 2011) has found that blogs contribute the agenda of elite media so there is some good reason to likewise expect an agenda-setting effect of social media on traditional elite media
- o Perhaps most notably, though, this analysis also identifies the limits of reciprocity for the public's media agenda through SNSs to enter into the traditional media agenda.



# Methods

- o This study began by collecting the top stories for the *New York Times*, CNN, Twitter, and Facebook for a period of six weeks in the fall of 2010 (October 11, 2010 to November 24, 2010).
- o The 2010 US Midterm Election was the exact midpoint of this data collection period (November 2, 2010).
- o At randomly selected intervals each day during this timeframe, the online editions of the *NYT* and CNN were simultaneously captured, along with the most trended topics on Twitter and the most frequent shares on Facebook.
- o These features were categorized following the coding originally outlined by Natarajan and Xiaoming (2003) and then rank-ordered, time-lagged, and compared to one another.



# Research Questions

- o RQ1: How do SNS and elite media agendas topically compare?
- o RQ2a: On the most prominent topics, does elite media set the SNS agenda?
- o RQ2b: On the most prominent topics, do SNSs set the elite media agenda?
- o RQ3a: Does elite media set the SNS agenda for election coverage?
- o RQ3b: Do SNSs set the elite media agenda for election coverage?



# General Results

- o 1710 headlines were coded for several features, the most important for this study being
  - o Category
  - o Election
- o The top 10 headlines each day from [cnn.com](http://cnn.com), [nyt.com](http://nyt.com), [whatthetrend.com](http://whatthetrend.com) (top 10 twitter trends in the US per day), and [itstrending.com](http://itstrending.com) (top 8 most shared stories on facebook).
- o Now, the categories of coverage across media type are (drumroll, please):



Table A: Coverage of News Topics on CNN, NYT, Twitter and Facebook

Category	CNN Rank	CNN %	NYT Rank	NYT %	Twitter Rank	Twitter %	FB Rank	FB %
<b>race/relig/culture</b>	<b>1,00</b>	<b>22,90</b>	4,00	7,10	<b>1,00</b>	<b>41,30</b>	<b>2,00</b>	<b>15,60</b>
<b>politics</b>	<b>2,00</b>	<b>17,30</b>	<b>1,00</b>	<b>28,70</b>	5,00	4,90	<b>1,00</b>	<b>22,80</b>
<b>crime/law &amp; order</b>	<b>3,00</b>	<b>9,30</b>	<b>3,00</b>	<b>7,30</b>	9,00	1,10	4,00	7,80
<b>business/economics</b>	4,00	7,10	<b>2,00</b>	<b>20,20</b>	8,00	1,60	<b>3,00</b>	<b>9,70</b>
accidents/disasters	5,00	6,90	6,00	5,10	7,00	2,70	8,00	3,90
media	6,00	5,80	9,00	3,10	4,00	5,30	5,00	7,20
health care	7,00	5,60	8,00	4,00	11,00	0,70	6,00	6,70
<b>oddities</b>	8,00	4,00	12,00	1,10	<b>2,00</b>	<b>18,70</b>	7,00	6,40
technology	8,00	4,00	11,00	1,30	6,00	3,60	12,00	1,10
war/terrorism	10,00	3,60	5,00	6,90	9,00	1,10	10,00	3,60
<b>sports</b>	11,00	3,30	7,00	4,40	<b>3,00</b>	<b>14,40</b>	10,00	3,60
ecology/environment	11,00	3,30	10,00	2,40	11,00	0,70	8,00	3,90
others	12,00	6,90	12,00	8,20	12,00	4,00	12,00	7,80
Total		100%		100%		100%		100%

# Findings

- o RQ1: How do SNS and elite media agendas topically compare?

Correlations

			facebook	twitter	nyt	cnn
Spearman's rho	facebook	Correlation Coefficient	1.000	.180	.639*	.849**
		Sig. (2-tailed)	.	.577	.025	.000
		N	12	12	12	12
	twitter	Correlation Coefficient	.180	1.000	-.070	.238
		Sig. (2-tailed)	.577	.	.828	.457
		N	12	12	12	12
	nyt	Correlation Coefficient	.639*	-.070	1.000	.681*
		Sig. (2-tailed)	.025	.828	.	.015
		N	12	12	12	12
	cnn	Correlation Coefficient	.849**	.238	.681*	1.000
		Sig. (2-tailed)	.000	.457	.015	.
		N	12	12	12	12

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\* . Correlation is significant at the 0.01 level (2-tailed).





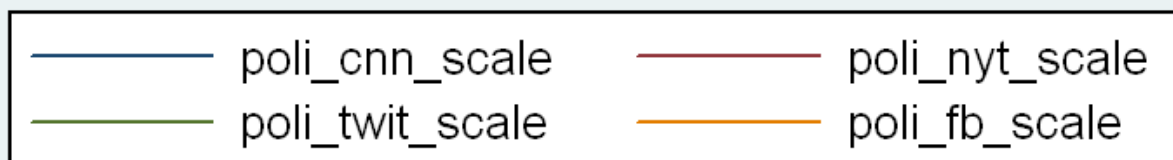
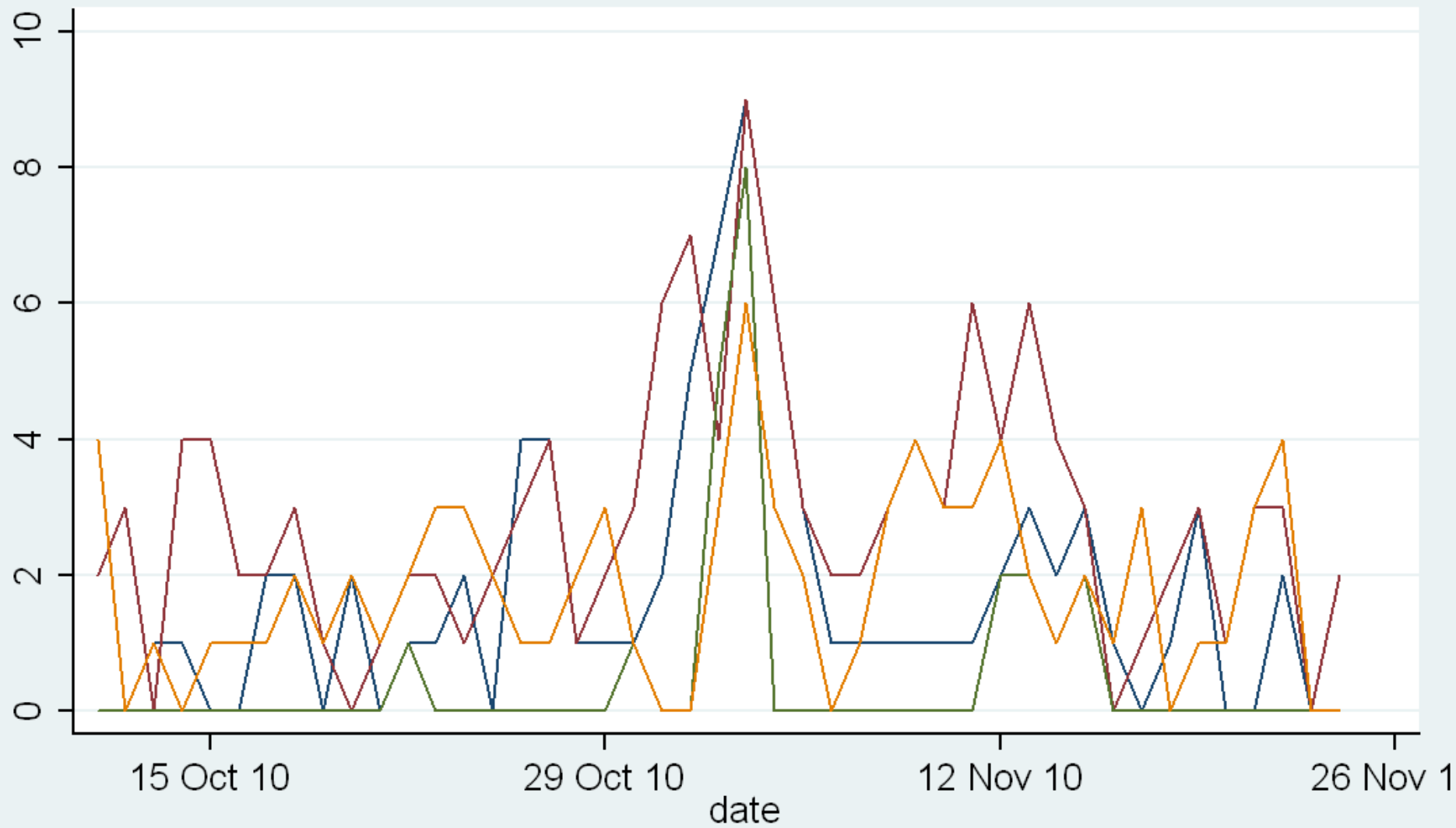
# Findings

- o RQ1(continued):
  - o Facebook and CNN highly correlated (0.85,  $p < .01$ );
  - o Facebook and NYT moderately correlated (0.64,  $p < .05$ )
  - o NYT and CNN moderately correlated (0.68,  $p < .05$ )
  - o Twitter correlated with.....NOTHING
- o But is that the whole story?
  - o Of course not...



# Findings

- o RQ2a: On the most prominent topics, does elite media set the SNS agenda?
- o RQ2b: On the most prominent topics, do SNSs set the elite media agenda?
- o The categories “Politics” and “Race/Religion/Culture” were analyzed further as these were the two most prominent categories across all four media.

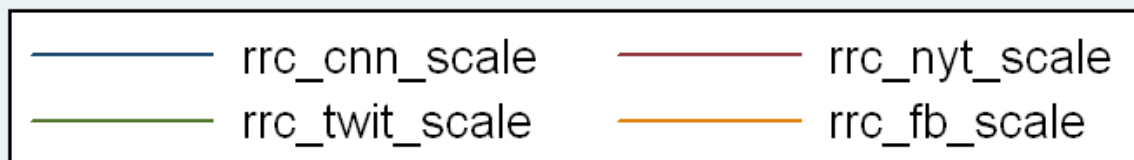
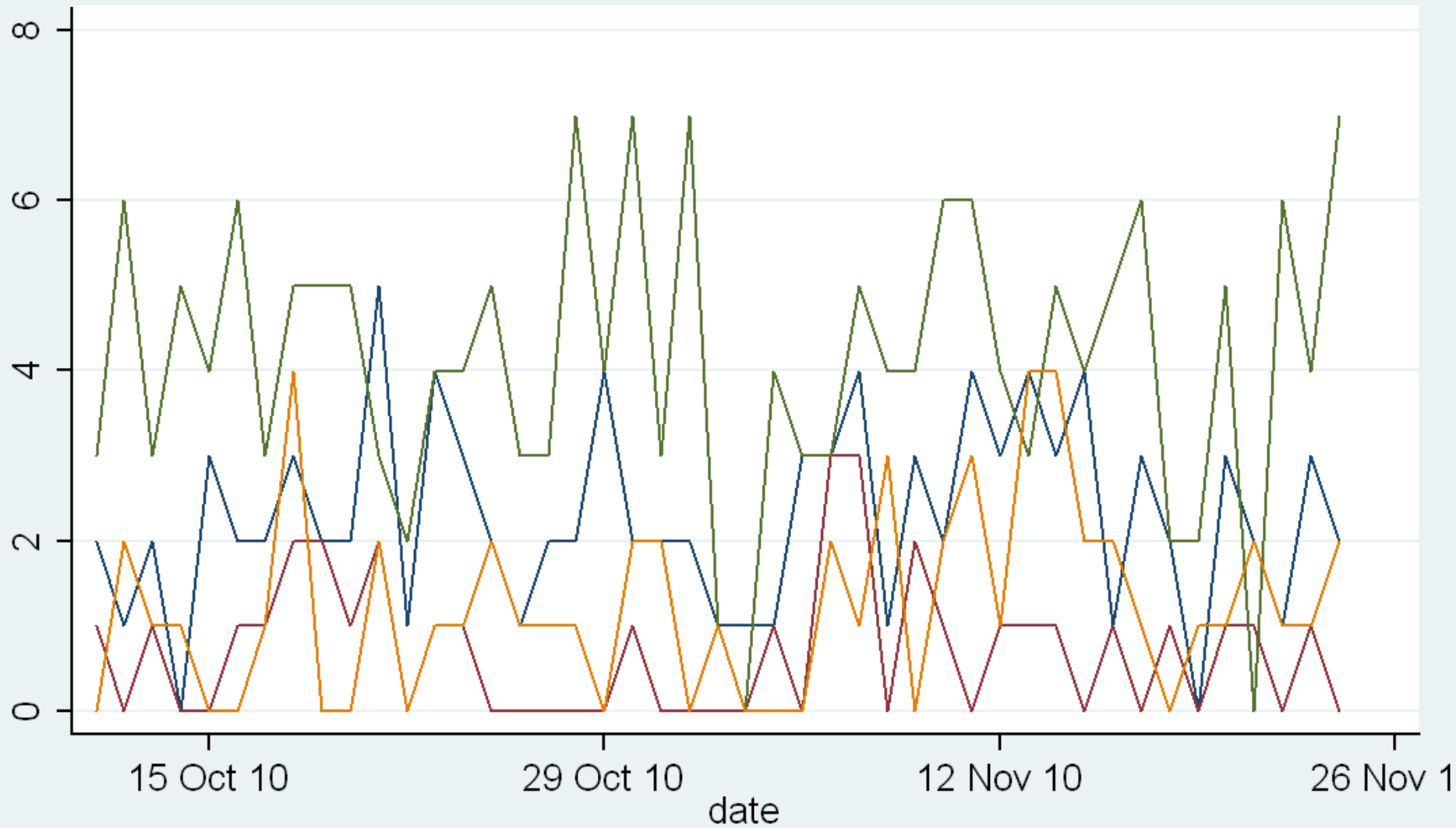


# Findings

- o RQ2a: On the most prominent topics, does elite media set the SNS agenda?
- o Here, political coverage on CNN Granger-caused (with lags of 1 and 2 days) political coverage on Twitter but only at  $p < 0.10$  ( $\chi^2 = 2.57$ ,  $p = 0.09$ )
- o The NYT Granger-caused politics coverage ( $\chi^2 = 4.35$ ,  $p = 0.02$ ) on Twitter.
- o FB did not have a predictive relationship to CNN or NYT or Twitter regarding politics.

# Findings

- o RQ2b: On the most prominent topics, do SNSs set the elite media agenda?
- o Here, political coverage on NYT Granger-caused (with lags of 1 and 2 days) political coverage on CNN ( $\chi^2 = 3.65$ ,  $p \leq .05$ )
- o Twitter nearly Granger-caused politics coverage ( $\chi^2 = 2.32$ ,  $p = 0.11$ ) on CNN.
- o FB did not have a predictive relationship to CNN or NYT coverage of politics.



# Findings

- o RQ2a: On the most prominent topics, does elite media set the SNS agenda?
- o Here, race/religion/culture (RRC) on CNN Granger-caused (with lags of 1 day) RRC coverage on Facebook ( $\chi^2 = 5.78$ ,  $p < .05$ )
- o The NYT also Granger-caused RRC coverage ( $\chi^2 = 3.55$ ,  $p = 0.07$ ) on Facebook but again only at  $p < 0.10$ .
- o FB did not have a predictive relationship to CNN or NYT or Twitter regarding politics.



# Findings

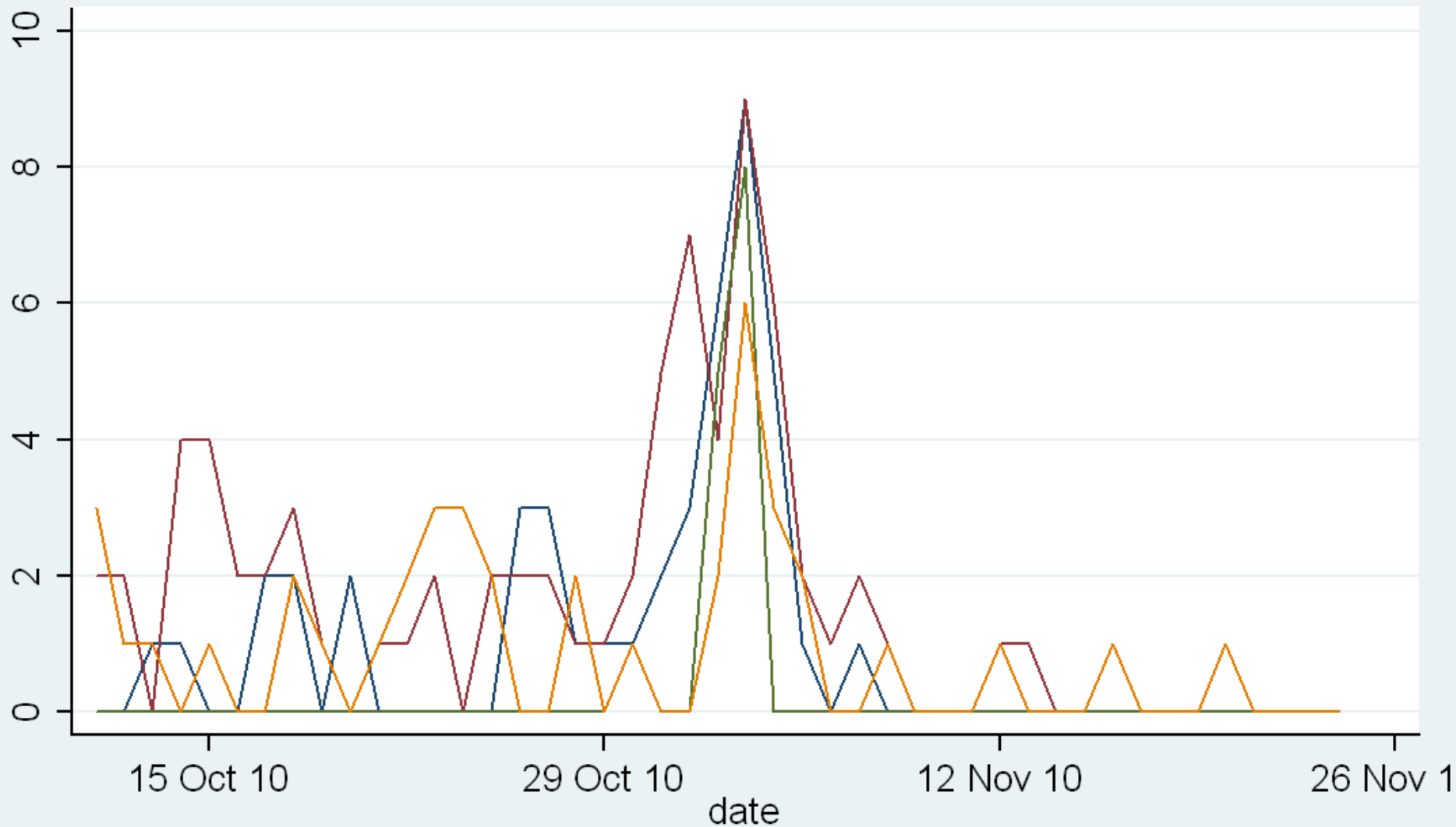
- o RQ2b: On the most prominent topics, do SNSs set the elite media agenda?
- o Here, race/religion/culture (RRC) coverage on Twitter Granger-caused (with lags of 1 day) RRC coverage on CNN ( $\chi^2 = 6.11, p \leq .05$ )
- o The only other relationship that approached significance was Facebook to CNN ( $\chi^2 = 1.41, p = 0.24$ ) coverage of RRC.



# Findings

- o RQ2 (together): What can we say?
- o Though generally uncorrelated, politics on Twitter was Granger-caused by both CNN and NYT.
- o When significantly correlated, RRC on Facebook was also Granger-caused by both CNN and NYT
- o Twitter nearly Granger-caused political coverage on CNN but DID Granger-cause RRC coverage on CNN.
- o Facebook came somewhat close to Granger-causing RRC coverage on CNN.
- o Interesting, social media showed no relationships to one another.





# Findings

- o RQ3a: Does elite media set the SNS agenda for election coverage?
- o Here, election coverage on CNN Granger-caused (with lags of 1 and 2 days) election coverage on Twitter ( $\chi^2 = 5.63$ ,  $p < .01$ )
- o The NYT also Granger-caused election coverage ( $\chi^2 = 5.90$ ,  $p < .01$ ) on Twitter.
- o Election coverage on CNN also G-caused election shares on Facebook ( $\chi^2 = 6.27$ ,  $p < .01$ )
- o The NYT—at  $p < 0.10$ —also showed this effect on the most frequent Facebook shares ( $\chi^2 = 2.46$ ,  $p = .10$ )
- o Twitter also came close to predicting election coverage on FB ( $\chi^2 = 2.59$ ,  $p = .09$ ).



# Findings

- o RQ3b: Do SNSs set the elite media agenda for election coverage?
- o Here, election coverage on NYT Granger-caused (with lags of 1 and 2 days) election coverage on CNN ( $\chi^2 = 4.80$ ,  $p < .05$ )
- o Twitter also G-caused CNN ( $\chi^2 = 3.01$ ,  $p < .10$ ) but just above  $p < 0.05$
- o CNN reciprocally Granger-caused election coverage ( $\chi^2 = 4.98$ ,  $p < .05$ ) on NYT.
- o Again, Twitter also G-caused NYT ( $\chi^2 = 3.45$ ,  $p < .05$ ) but Facebook predicted neither NYT or CNN.

# Findings

- o RQ3(together): So?
- o Strong evidence that elite media sets both Twitter and Facebook agendas on election coverage
- o Some evidence that the agenda trends on Twitter help explain election coverage on NYT and CNN.
- o Fair amount of reciprocal effects between elite media but fewer among social media.
- o Thus, people are using different forms of social media differently and SNSs should NOT be considered uniform in content, application, or effect.

# Conclusions

- o Findings suggest topically, Facebook is relatively strongly related to both CNN and NYT.
- o Twitter seems to have almost nothing *topically* to do with any of the other three.
- o However, when set in a predictive capacity on *specific* topics, Twitter coverage can precede and help explain elite media coverage of race/religion/culture and elections (and nearly politics at  $p < .10$ ).
- o Facebook did not show similar predictive Granger-causal relationships.



# Conclusions

- o On the other hand, elite media consistently set the agendas in time-ordered Granger-causal capacity for both Twitter and Facebook.
  - o Twitter moreso than Facebook, however.
- o Agenda trending is happening, but it seems only at specific moments where the impact of twitter focuses on that event.
  - o Note the much more evident relationships with election coverage than politics in general or race/religion/culture.
- o Clearly, social media is important and has the *potential* to shape elite agendas BUT those trends are informed by those very same elite agendas.
  - o Thus, patterns of reciprocity and reinforcement and not always innovation.

