

Social Media and the Rise of Dark Horse Candidates

Yotam Shmargad
Assistant Professor
University of Arizona

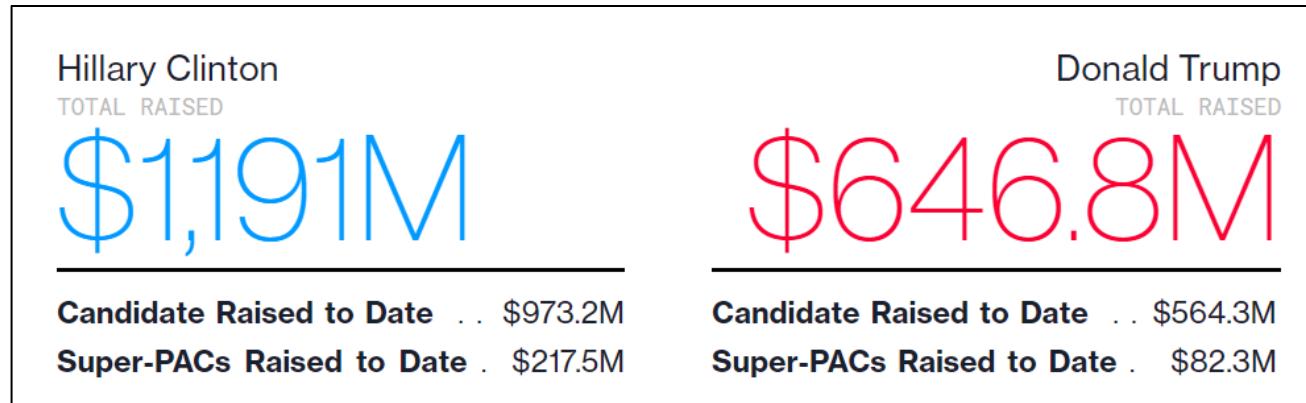
Limin Zhang
Doctoral Student
University of Arizona

“I think that social media has more power than the money they spent, and I think maybe to a certain extent, I proved that.”



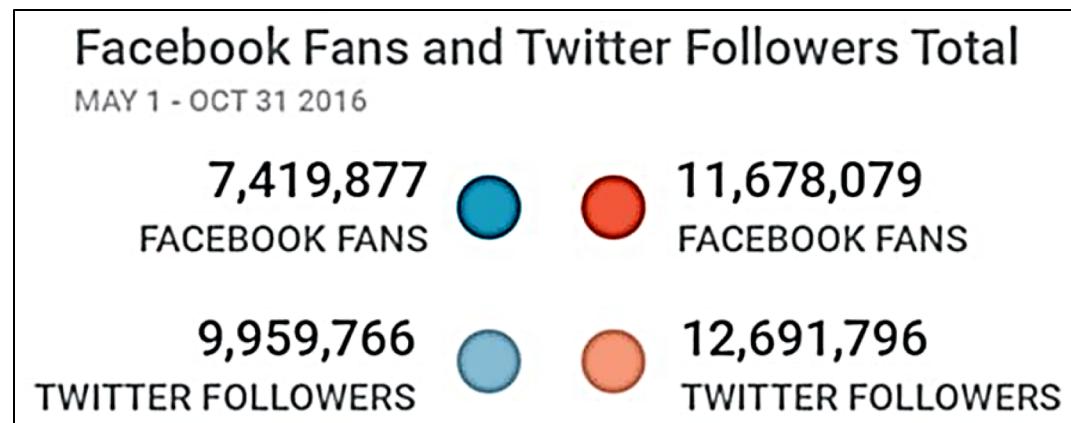
Indeed, Trump's campaign raised less money than Clinton's but performed better on social media

Money raised



Source: <https://www.bloomberg.com/politics/graphics/2016-presidential-campaign-fundraising/>

Social metrics



Source: <https://memeburn.com/2016/11/hillary-clinton-donald-trump-twitter-facebook/>

There is debate about whether social media can help political groups overcome financial shortcomings

Research on social movements

Social media can **dampen** financial inequalities by decreasing the costs of participation (e.g. Earl & Kimport 2011)



Social media **exacerbate** financial inequalities because of learning costs (e.g. Schradie 2018)

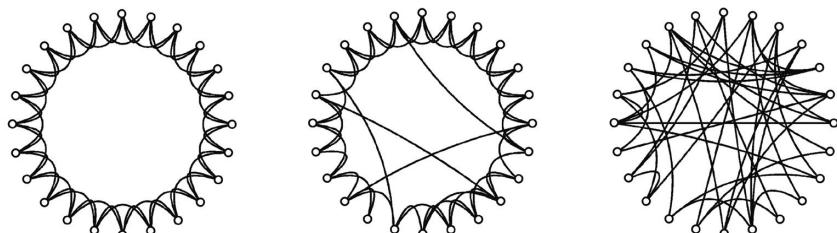
Political scientists care about what campaigns can do to overcome shortcomings

Research on campaigns

Negative ads are more effective for challengers than incumbents (e.g. Lau and Pomper 2002)



Certain **social networks** can help campaigns with fewer resources to succeed (Klar and Shmargad 2017)



Did social media play an equalizing role in the 2016 U.S. congressional elections?



The plan for today

Motivation

Method

Results

Implications

To study congressional elections, I link data from the Federal Election Commission, Dataverse, and Twitter

Data sources

- 1) Campaign expenses and other candidate data



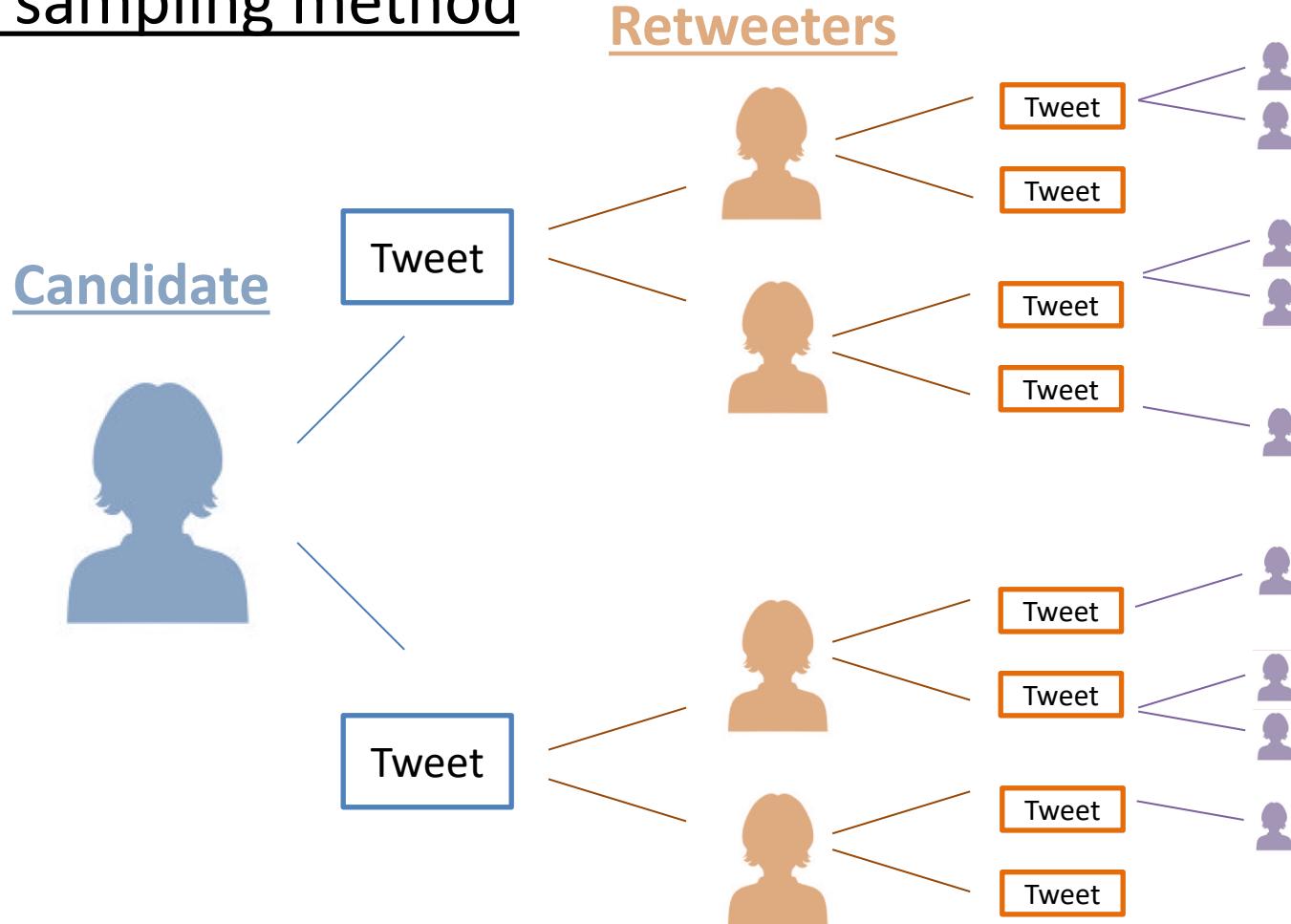
- 2) Outcomes of house and senate elections

- 3) Data about candidates' Tweets and Retweeters



In order to collect Twitter data, I wrote a script that snowballs out from a candidate's Twitter account

Twitter sampling method





@nick2crosby



@MaddowBlog



@MarkRuffalo



@mitchellreports



@repjohnlewis
GA-5



@TGowdySC
SC-4



@jasoninthehouse
UT-3



Interactive Visualization:

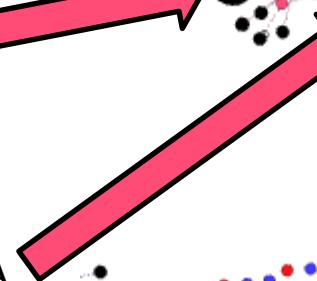
www.yotamshmargad.com/congress2016



@ChatRevolve



@Braveheart_USA



@NubianAwakening

Students in my Computational Social Science class helped with the data collection for this project

Class assignments

1) Collect vote shares of the top two candidates in several electoral races using Wikipedia: **263 races total**

2) Find candidate Twitter handles: **406 candidates total**

3) Collect candidate tweet data from August 3rd to November 8th with Twitter's API (and UA's high performance computing servers)

~ 25K candidate tweets

~ 190K retweeters of candidate tweets

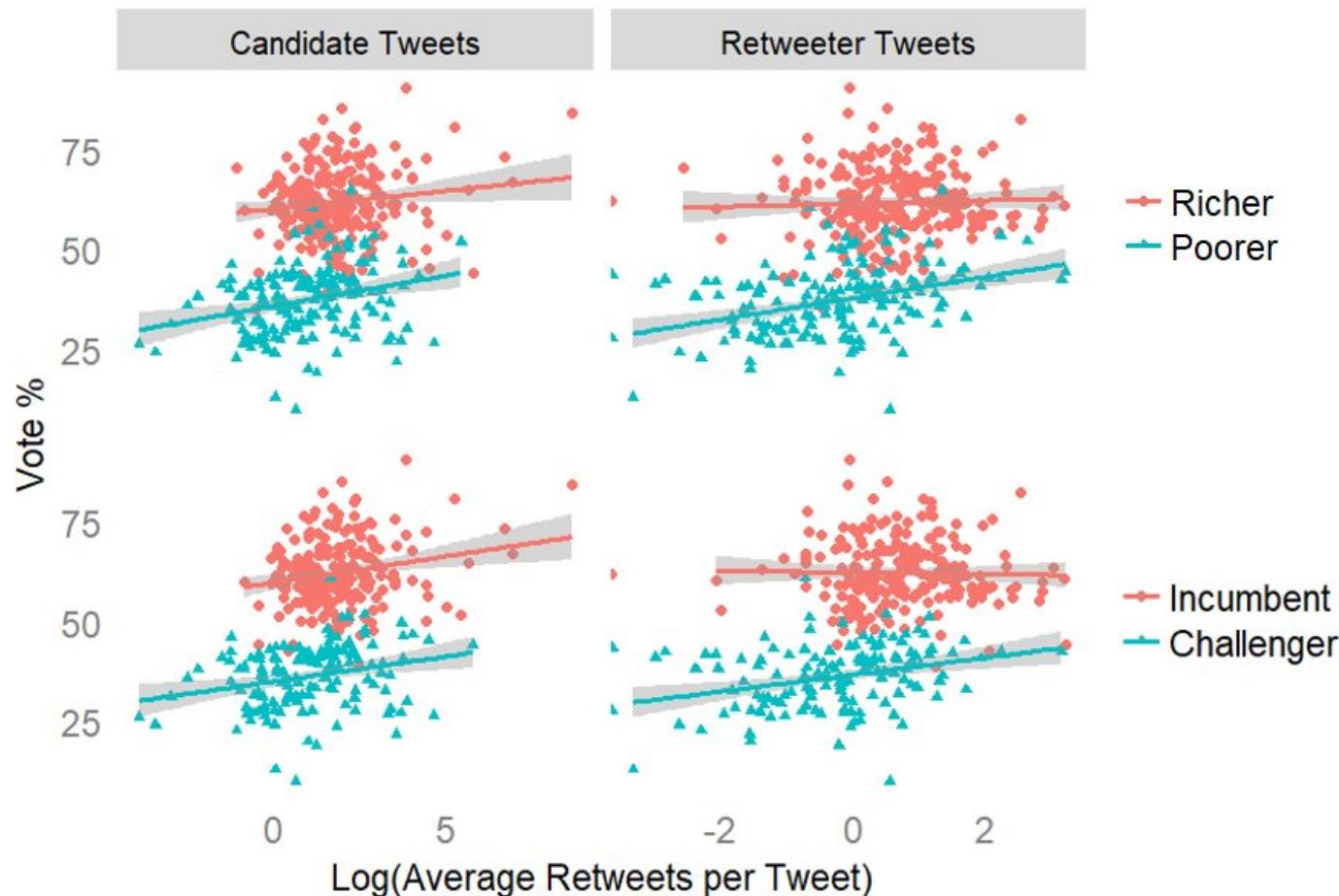
~ 900K retweeter tweets

~ 1.3M retweeters of retweeters

I then combined these data with FEC data on **campaign expenses**

Retweets from popular users are positively associated with votes for poorer candidates and challengers

Vote % by retweets and candidate status



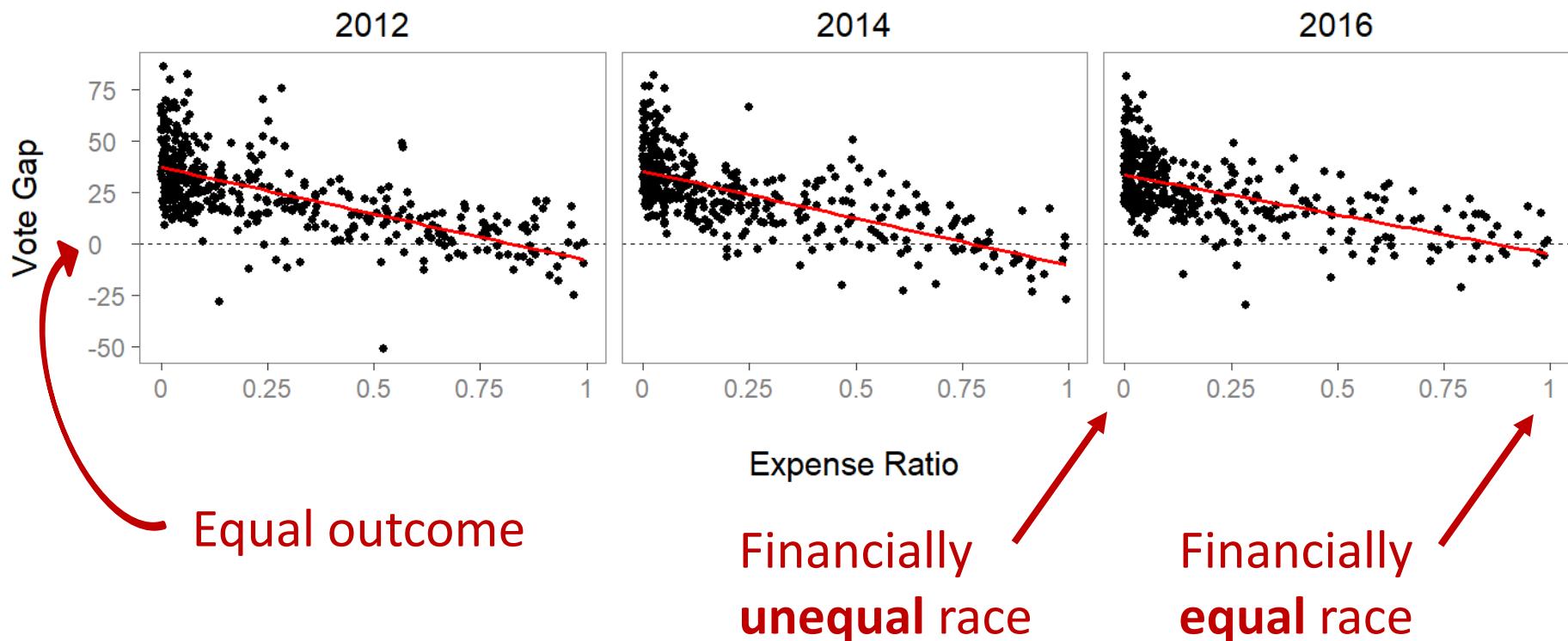
Races with more equal expenses saw more equal electoral outcomes

Expense Ratio:

$$\frac{\$ \text{of poorer candidate}}{\$ \text{of richer candidate}}$$

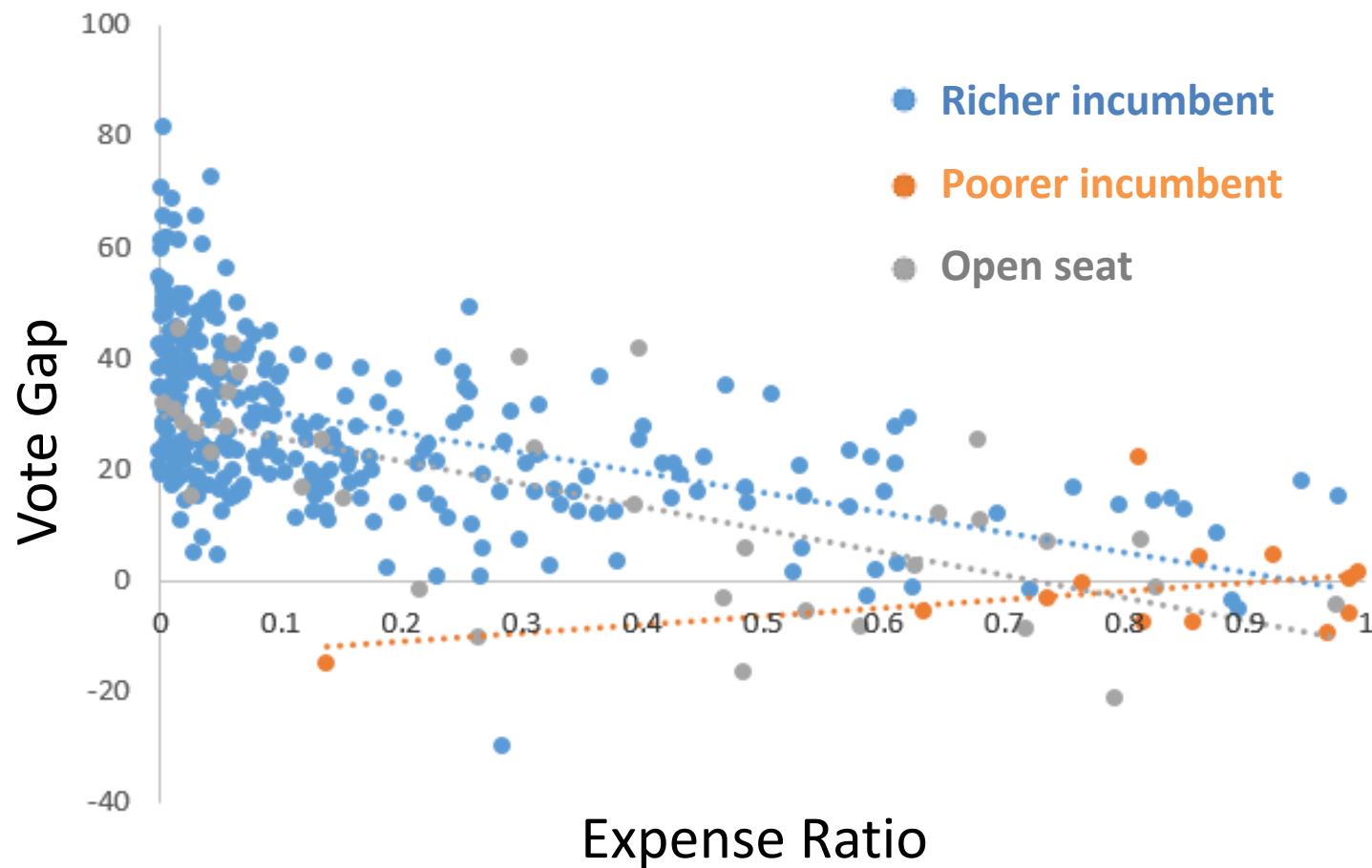
Vote Gap:

$$\text{Vote \% of richer candidate} - \text{Vote \% of poorer candidate}$$



The relationship between money and votes in 2016 is flat when the poorer candidate is the incumbent

The effect of incumbency in 2016



I model electoral outcomes at both the candidate and race levels

Candidate-level models

$$\text{Vote \%} = \alpha + \beta \times \text{Underdog}$$

+ Γ x Twitter metrics and controls

+ Δ x Underdog x Twitter metrics and controls

+ State fixed effects + ε

Race-level models

$$\text{Vote Gap} = \alpha + \beta \times \text{Expense Ratio}$$

+ Γ x Twitter metrics and controls

+ Δ x Expense Ratio x Twitter metrics and controls

+ State fixed effects + ε

The plan for today

Motivation

Method

Results

Implications

Retweets from popular Twitter users matter more for underdog candidates

Candidate-level models

	Baseline				× Poorer			
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Constant	60.7**	1.93	-21.4**	2.93	66.9**	1.41	-26.1**	3.79
<u>Twitter Metrics</u>								
Tweets	.009	.016	.019	.028	.000	.017	.025	.027
Retweets	.004**	.001	-.025	.041	.004**	.001	-.057**	.028
Retweets of RTers	-.025	.163	.608**	.263	.008	.146	.593*	.304
State FE	Included				Included			
Adjusted R ²	.747				.783			
Observations	406				362			

* p < 0.1; ** p < 0.05

Additional controls: Senate, Party, CNN mentions, Campaign Expenses

Retweets from popular users help poor candidates close the vote gap in financially unequal races

Race-level model of Vote Gap in 2016

	Baseline				× Expense Ratio			
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Constant	51.9**	8.68	-73.0**	24.5				
<u>Twitter Metrics</u>	<u>Richer candidate</u>				<u>Poorer candidate</u>			
Tweets	-.037	.053	-.181	.191	-.101*	.059	-.181	.191
Retweets	.059**	.026	-.621	.380	-.236	.154	.732	.544
Retweets of RTers	-.228	.530	1.27	2.10	-2.72**	.874	3.29**	1.24
State FE					Included			
Adjusted R ²					.546			
Observations					135			

* p < 0.1; ** p < 0.05

Additional controls: Senate, Party, CNN mentions, Total Race Expenses

When comparing to the vote gap in 2014, only the popularity of poorer candidates' retweeters matter

Race-level model of Vote Gap in 2016 - 2014

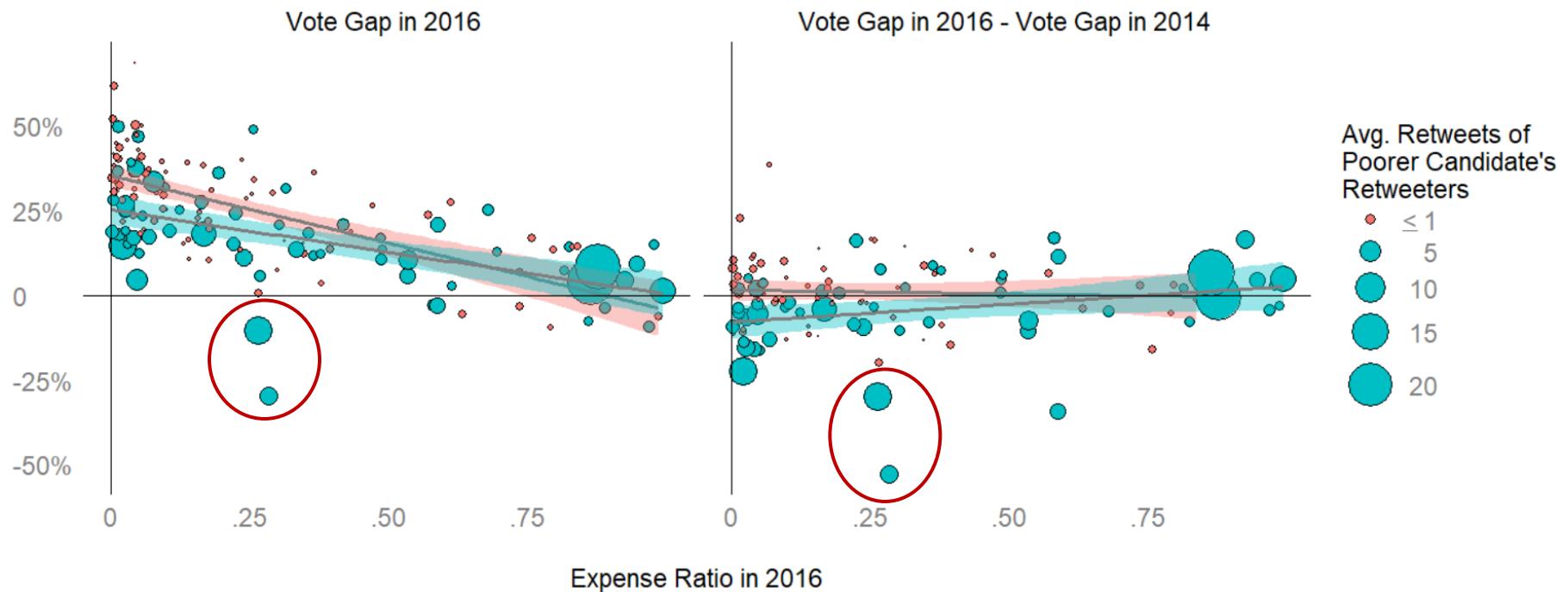
	Baseline		× Expense Ratio		Baseline		× Expense Ratio	
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Constant	25.0**	9.38	-49.3*	26.3				
<u>Twitter Metrics</u>	<u>Richer candidate</u>				<u>Poorer candidate</u>			
Tweets	-.062	.058	.124	.262	-.082	.063	-.081	.283
Retweets	-.027	.049	.748	.681	.008	.335	-2.22	1.48
Retweets of RTers	-.095	.487	-.694	2.12	-2.93**	.862	3.65**	1.41
State FE					Included			
Adjusted R ²					.384			
Observations					109			

* p < 0.1; ** p < 0.05

Additional controls: Senate, Party, CNN mentions, Total Race Expenses

Retweets from popular users help poorer candidates close the vote gap, even when compared to 2014

Vote gap in 2016 and when compared to 2014





@donna_brazile

@val_demings
FL-10

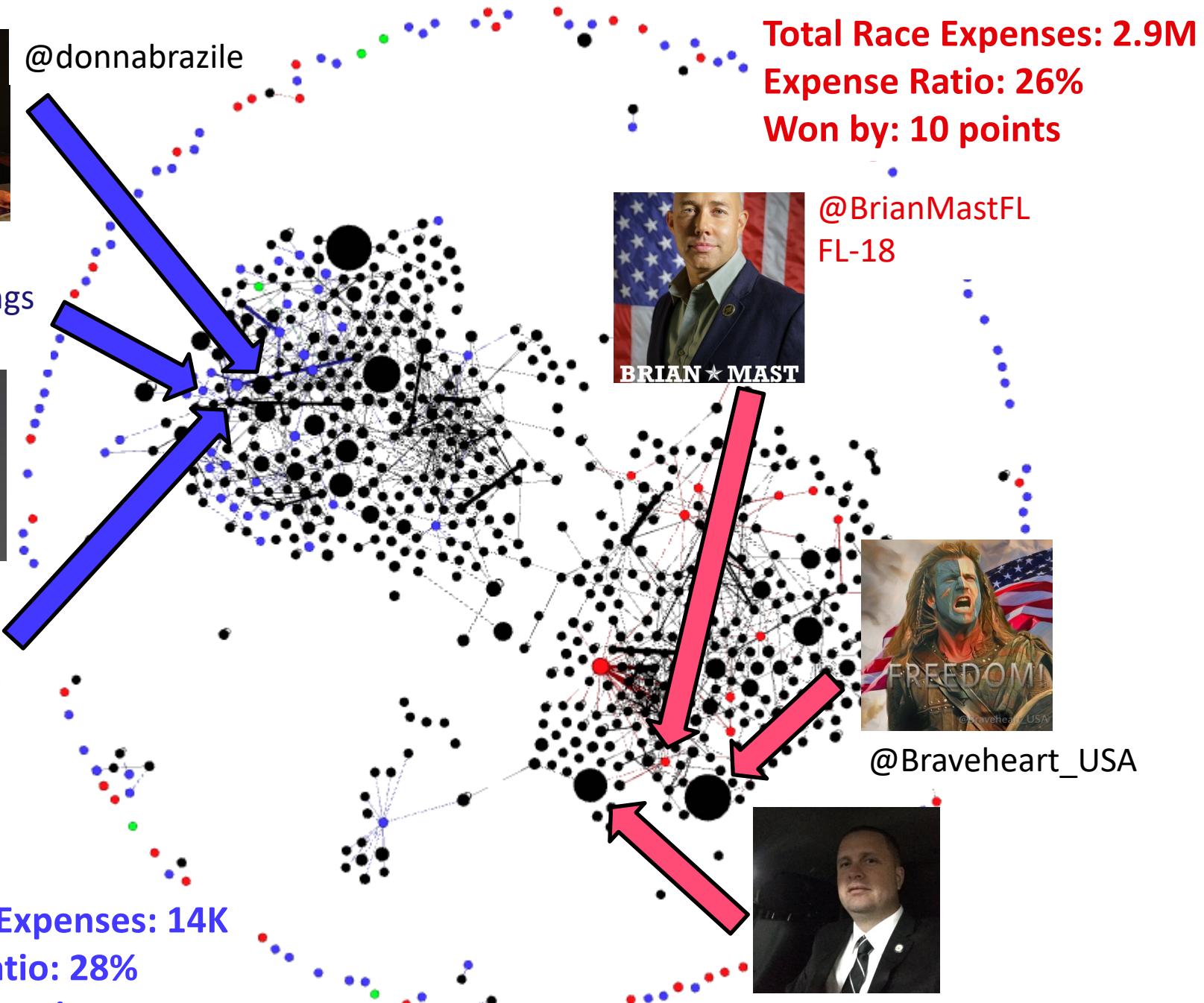


FLORIDA

DEMS

@FlaDems

Total Race Expenses: 14K
Expense Ratio: 28%
Won by: 30 points



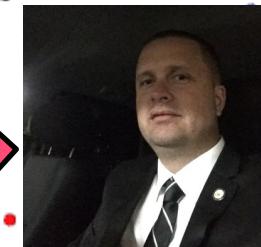
Total Race Expenses: 2.9M
Expense Ratio: 26%
Won by: 10 points



@BrianMastFL
FL-18



@Braveheart_USA



@ChatRevolve

The plan for today

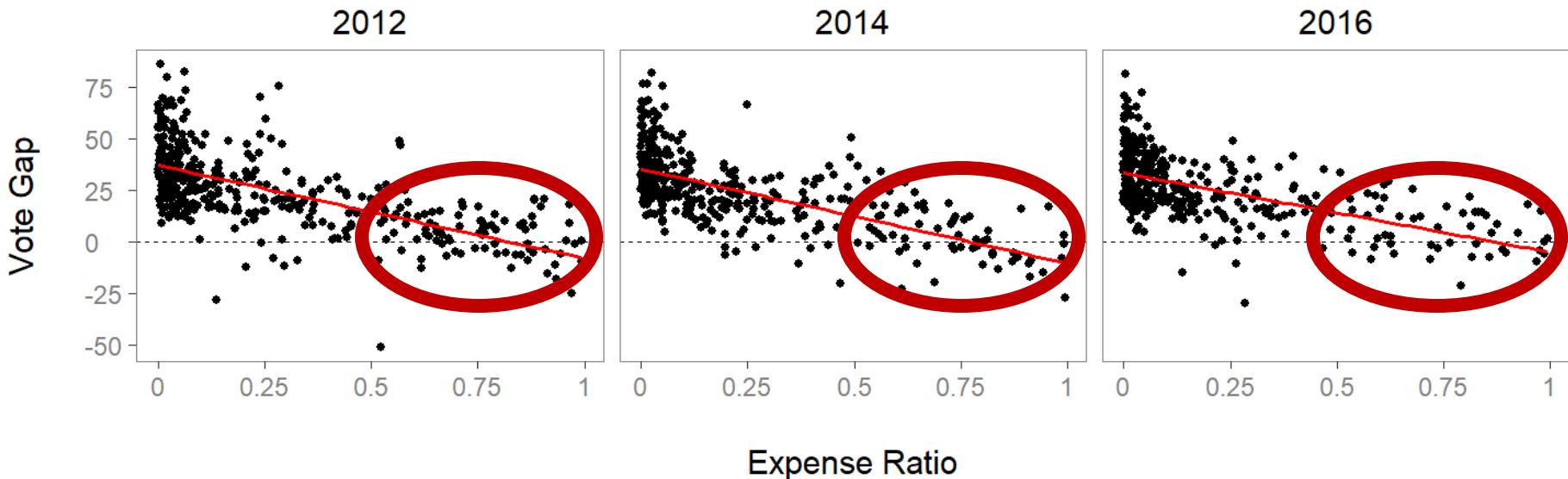
Motivation

Method

Results

Implications

Money is still the best equalizer, but Twitter can help explain the success of poorer candidates



Ongoing research

- Can Twitter help political candidates increase donations?
- Does money help political candidates gain engagement from popular Twitter users?

There are a host of open questions regarding *why* endorsements from popular Twitter users matter

Future research

- Do popular users simply broaden **exposure** to candidate's message, or are they adding **legitimacy**?
- Are popular users giving **local issues** a national audience, or aligning local candidates with **national agendas**?
- Do endorsements only matter for messages that focus on a **competitor's weaknesses** (i.e. negative ads), or can they also highlight a **candidate's own accomplishments**?

I study implications of Big Nets – the large, dense, and diverse networks afforded by social media



Social Media and the Rise of Dark Horse Candidates

Yotam Shmargad
Assistant Professor
University of Arizona

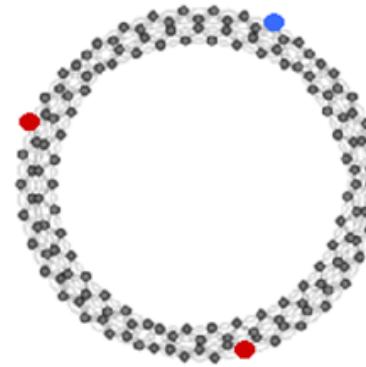
yotam@email.arizona.edu

Certain networks can help campaigns with limited resources succeed (Klar and Shmargad 2017)

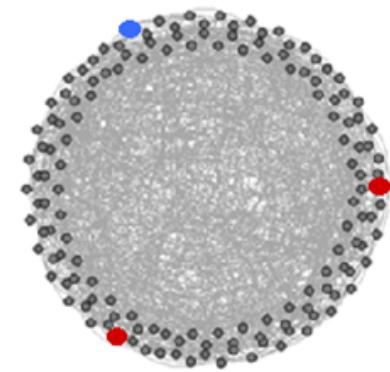
Network Experiment

- assigned participants to different networks
- asymmetrically seeded opposing political views

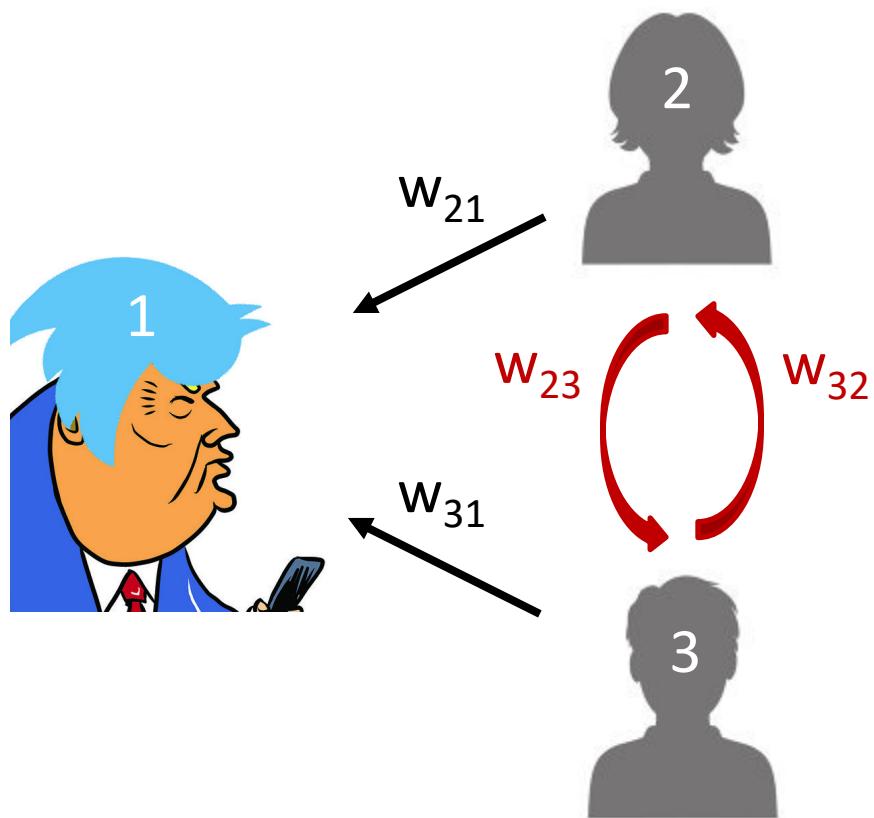
Clustered lattice



Random network



A candidate's **retweet network** includes both their retweeters and retweeters of their retweeters



Edges have
weights w_{ij} –
the number of
 j 's posts that i
has retweeted

Retweeters may
retweet each
other, so that we
can compute
network metrics

The metrics that matter on Twitter mimic traditional media, though potentially apply to new actors

Broadcasts vs. Contagion



- In an analysis of more than 1 billion diffusion cascades on Twitter, Goel et al. (2016) show that popularity is usually driven by large broadcasts not contagion
- Findings from Klar and Shmargad (2017) may be more applicable to contagion among elites

Correlates of success on Twitter may depart from traditional social network theories

Reconsidering secondhand effects

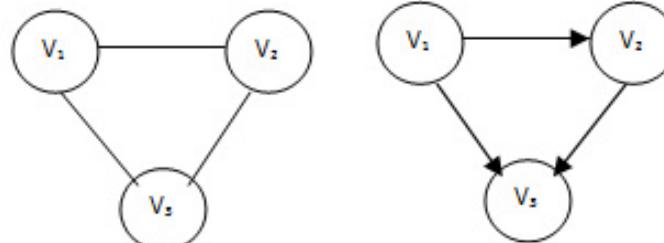
- Burt (2010) shows that knowing well-connected people has little effect on success, but secondhand retweets play an important role here
- In a book chapter on digital marketing, I argue that *ideological capital* is better than social capital for describing the value accrued from online interaction

Social capital

Based on trust

Usually reciprocal

Geographically-bound



Ideological capital

Based on shared beliefs

Often impersonal

Geographically-dispersed