Relational Voter Turnout Results: Tag, You're It?

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Objective: This experiment explored how tagging someone in a status about voting on Facebook affected whether they voted in the 2018 general election, and further, how their vote was affected by the person who tagged them and the aspects of their relationship with that person.

Specifics: SDAN partnered with Dr. Katherine Haenschen (Assistant Professor of Communication at Virginia Tech) to design this study, with support from the Analyst Institute's Relational Organizing Directed Research Fund. SDAN recruited 7 Sister District volunteers to tag their eligible friends and family in statuses about voting (referred to herein as "taggers" and a "tagger"). People on each tagger's friend lists who lived in the study's target states (Colorado, Washington, Michigan, Pennsylvania) were matched to the national voter file. The list was narrowed to friends with TargetSmart voter turnout propensity scores between 0 and 75 and TargetSmart partisanship scores between 50-100. Up to 52 of these people per tagger were randomized into 3 conditions (civic duty - tagged in a status about how voting is a civic duty, pride - tagged in a status thanking them for voting this year, and control - not tagged in any status). This resulted in a total sample of 254. All friends in a tagged condition were tagged in a Facebook status a few days before vote by mail ballots were mailed in Colorado and Washington (October 18, 2018) or a few days before the election in Michigan and Pennsylvania (November 2, 2018) depending on the state they lived in.

Key Findings:
- Just looking at whether the friends in the study voted based on condition, a chi-square test indicates that there is no significant relationship between the condition a person was in and whether they voted or not (p = 0.344). On its own, tagging someone in a status had no effect on voting in the 2018 general election.

Voted?	No tagging	Civic duty	Pride
No	12	20	16
Yes	71	66	69
Total	83	86	85
Turnout rate	85.54%	76.74%	81.18%

χ^2 (2) = 2.1336, p = 0.344

VOTING X CONDITION
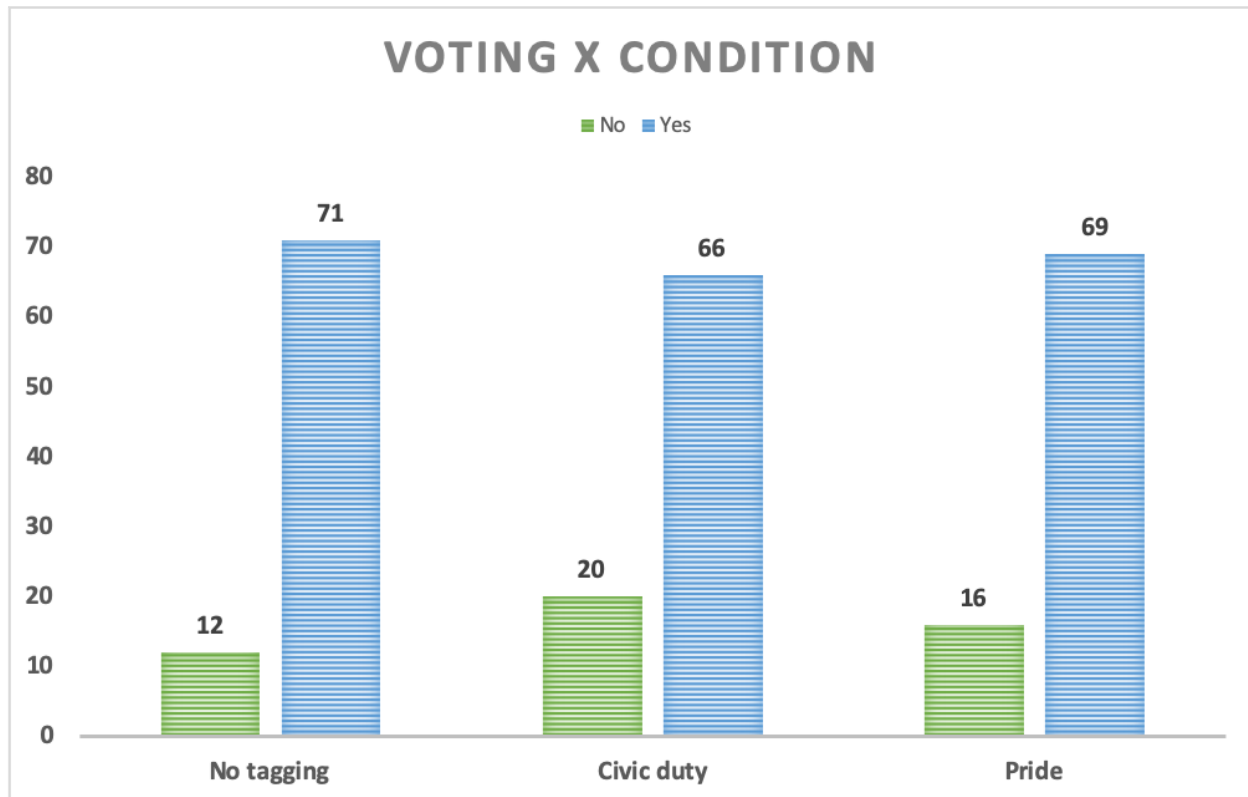
- Neither the civic duty (p = 0.610) nor the pride (p=0.681) condition significantly predicted whether friends voted in the 2018 general election. This indicates that being tagged in the civic duty or pride condition was no different than not being tagged in any status.
  - Turnout score was a significant predictor (p < 0.001) of voting in the general election, as one would expect as the score itself is an estimate of likelihood of voting. For each point in increase in turnout score, the odds of voting increased around 6.7%
  - Interpersonal closeness between the friend and their tagger (assessed with the IOS scale; Aron, Aron, & Smollen, 1992) was a marginally significant predictor of voting (p = 0.070). The odds ratio indicates that for each point increase in closeness, the odds of voting increased around 40% (it's important to note that over half of the friends were rated a 1 or 2 on the closeness scale and very few friends were rated a 6 or 7, which were the highest scores).

Variable	Odds Ratio (Robust Std. Err.)	Z score	95% Conf. Interval	p-value
Condition (Ref=controls)				

	OR (SE)	z	95% CI	p
Civic Duty	1.328266 (0.7396474)	0.51	0.4459557-3.9562	0.610
Pride	1.275265 (0.7541733)	0.41	0.4001401-4.064328	0.681
Gender (Ref=Female)				
Male	1.072469 (0.5041636)	0.15	0.4268136-2.69483	0.882
Unknown	- (-)	-	-	-
Race (Ref=white)				
Black	0.3040036 (0.6929045)	-0.52	0.0034895-26.48452	0.601
Asian	- (-)	-	-	-
Hispanic	- (-)	-	-	-
Unknown	0.486797 (0.6094408)	-0.58	0.0418499-5.662412	0.565
Closeness (continuous)				
	1.403433 (0.2627283)	1.81	0.9723965-2.025536	0.070 †
Turnout (continuous)				
	1.067438 (0.0143317)	4.86	1.039715-1.095901	<0.001*
Dem score (continuous)				
	0.9947425 (0.0191236)	-0.27	0.9579582-1.032939	0.784
Age (continuous)				
	0.9928908 (0.024761)	-0.29	0.9455271-1.042627	0.775

χ^2 (9) = 41.43, p < 0.001, pseudo R^2 = 0.2530 (n=162; loss in n due to limitation on information about voter ages)

† Marginally statistically significant at the p = 0.1 level

* Statistically significant at the p = 0.05 level

Secondary and Exploratory Analyses:

- We looked at how personality factors of the tagger and aspects of the relationship between the friend and their tagger affected the friend's likelihood of voting and found that personality factors of the tagger were completely unrelated to the friend voting. Intellectual humility (a measure that reflects "...the degree to which people recognize that their beliefs may be wrong" (Leary et al., 2017)) and the Big Five personality factors (openness to experience, conscientiousness, agreeableness, extraversion, neuroticism) of the tagger proved to be completely unrelated to the friend's voting behavior (all 5 ps ≥ 0.991).

Variable	Odds Ratio (Robust Std. Err.)	Z score	95% Conf. Interval	p-value
Condition (Ref=controls)				
Civic Duty Pride	0.9181539 (0.4528038) 0.8894873 (0.4445626)	-0.17 -0.23	0.3492452-2.413796 0.3339737-2.369012	0.863 0.815
Intellectual humility (continuous)				
	61.58615 (23112.92)	0.01	-	0.991
Closeness (continuous)				
	1.022584 (0.204464)	0.11	0..6910392-1.513197	0.911
Midterm turnout (continuous)				
	1.075826 (0.0126316)	6.22	1.051352-1.100871	<0.001*
Dem score (continuous)				
	0.9838149 (0.0166567)	-0.96	0.9517041-1.017009	0.335
Related to P (ref=no)				
Yes	1.613985 (1.941962)	0.40	0.1526603-17.06369	0.691
Freq. of FB interaction (continuous)				
	1.325039 (0.2572926)	1.45	0.905617-1.938709	0.147
Friend Neuroticism (continuous)				
	2.374287 (194.9208)	0.01	3.12e-70-1.80e+70	0.992
Friend Openness (continuous)				
	0.0035282 (1.715054)	-0.01	-	0.991

Friend Conscientiousness (continuous)				
	0.0487479 (13.08053)	-0.01	1.9e-230-1.2e+227	0.991
Friend extraversion (continuous)				
	1.864579 (103.7905)	0.01	7.75e-48-4.49e+47	0.991
Friend agreeableness (continuous)				
	41.72783 (13182.84)	0.01	5.1e-268-3.4e+27	0.991

χ^2 (13) = 68.51, p < 0.001, pseudo R^2 = 0.2792 (n=252)
† Marginally statistically significant at the p = 0.1 level
* Statistically significant at the p = 0.05 level

- Since the personality traits of the tagger were clearly unrelated to voting, we removed the tagger-level personality factors and only included the relationship factors as rated by the tagger for each friend in the study. Results were similar, with turnout score being the only significant predictor for voting in the 2018 general election. Interestingly, the frequency of Facebook interaction almost reached marginal significance, indicating that it was potentially the frequency of the level of interaction on Facebook the voter had with the tagger that may have driven an increased likelihood to vote as opposed to the status itself.

Variable	Odds Ratio (Robust Std. Err.)	Z score	95% Conf. Interval	p-value
Condition (Ref=controls)				
Civic Duty Pride	0.9171454 (0.4463103) 0.8983868 (0.4456304)	-0.18 -0.22	0.3492452-2.413796 0.3339737-2.369012	0.859 0.829
Closeness (continuous)				
	1.033784 (0.1860894)	0.18	0..6910392-1.513197	0.854
Midterm turnout (continuous)				
	1.075826 (0.0125069)	6.29	1.051352-1.100871	<0.001*

Dem score (continuous)				
	0.9878435 (0.0151884)	-0.80	0.9517041-1.017009	0.426
Related to P (ref=no)				
Yes	1.693224 (1.98009)	0.45	0.1526603-17.06369	0.652
Freq. of FB interaction (continuous)				
	1.325984 (0.2395339)	1.56	0.905617-1.938709	0.118

$\chi^2 (7) = 66.70$, $p < 0.001$, pseudo $R^2 = 0.2718$ (n=252)
* Statistically significant at the p = 0.05 level

- Since the frequency of Facebook interaction may be irrelevant for friends who did not actually get tagged in a status (controls), we looked at the same model but restricted the sample to only those who were tagged on Facebook. In the exploratory model with only people who were tagged (people in the civic duty or pride conditions), we found that the frequency of Facebook interaction between the tagger and tagged friend significantly predicted whether or not friends voted (p = 0.044). For each point increase in Frequency of FB interaction rating, friends who were tagged had 66% higher odds of voting. In other words, the more taggers interacted with the friends they tagged on Facebook, the more likely those friends were to vote.

Variable	Odds Ratio (Robust Std. Err.)	Z score	95% Conf. Interval	p-value
Condition (Ref=Civic Duty)				
Pride	0.9438673 (0.4984425)	-0.11	0.3352771-2.65716	0.913
Closeness (continuous)				
	0.8641508 (0.1971016)	-0.64	0.552639-1.351256	0.522
Midterm turnout (continuous)				
	1.104005 (0.0189683)	5.76	1.067446-1.141815	<0.001*
Dem score (continuous)				

Variable	Odds Ratio (Robust Std. Err.)	Z score	95% Conf. Interval	p-value
	0.9885914 (0.018534)	-0.61	0.9529247-1.025593	0.541
Related to P (ref=no)				
Yes	0.2172846 (0.3320639)	-1.00	0.0108689-4.343825	0.318
Freq. of FB interaction (continuous)				
	1.663395 (0.4203187)	2.01	1.013696-2.7295	0.044*

χ^2 (6) = 66.45, p < 0.001, pseudo R^2 = 0.3796 (n=169)
* Statistically significant at the p = 0.05 level

- Finally, we ran a model that included an interaction between the treatment condition (status message the friend was tagged in) and frequency of Facebook interaction between the tagger and tagged friend to determine if condition mattered for people who interacted with their tagger on Facebook more (or less) often. The interaction did not approach statistical significance (p = 0.680), indicating that frequency of Facebook interaction had an effect on voting that was largely unaffected by the status the friend was tagged in.
  - Interestingly, the frequency of Facebook interaction goes back to approximately marginal significance, indicating that the interaction between frequency of FB interaction and condition accounts for some of the variance that was previously accounted for by frequency of FB interaction. This essentially means that the interaction may possibly account for a small amount of variance in the voting outcome but that it isn't meaningful in this sample. This gives us a potentially intriguing future direction for Facebook research with larger samples.

Variable	Odds Ratio (Robust Std. Err.)	Z score	95% Conf. Interval	p-value
Condition (Ref=Civic Duty)				
Pride	0.6868884 (0.641648)	-0.40	0.1100898-4.285734	0.688
Closeness (continuous)				
	0.8395195 (0.1991038)	-0.74	0.5274198-1.336304	0.461
Midterm turnout (continuous)				
	1.104757 (0.0191777)	5.74	1.067802-1.142991	<0.001*

Dem score (continuous)				
	0.9882836 (0.0185844)	-0.63	0.9525219-1.025388	0.531
Related to P (ref=no)				
Yes	0.2522907 (0.4051146)	-0.86	0.0108415-5.87102	0.391
Freq. of FB interaction (continuous)				
	1.575846 (0.4406021)	1.63	0.9110042-2.725884	0.104
Freq. of FB interaction x pride cond (continuous)				
	1.185796 (0.4898454)	0.41	0.5276959-2.664627	0.680

$\chi^2 (7) = 66.63$, $p < 0.001$, pseudo R^2 = 0.3806 (n=169)

Takeaways:
- In this study, being tagged by a friend in a status encouraging voting on Facebook had no effect on whether or not the tagged person voted.
- In the secondary analysis, interpersonal closeness between the tagged friend and their tagger had a small, marginally significant effect on voting.
- In the exploratory analyses, frequency of Facebook interaction between the tagged friend and their tagger had a significant effect on voting for people who were tagged in a status.

Caveats and limitations:
- This study specifically looked at the voting behavior of friends of Sister District volunteers and cannot be fully generalized outside of that context. The sample was skewed on both age (concentrated around 30-45) and race (mostly white). Not only does this mean that we can't meaningfully control for those variables in the analysis, it means we can't make any meaningful interpretations of the roles of those variables as they pertain to the outcome.
- Additionally, over 76% of the people in all conditions voted in the general election, a much higher rate than the rest of the country and in each of the states included in the study. This indicates that, while we had aimed to run the study on a "GOTV sample" (i.e., a group of voters who need to be reminded to get out to vote), our actual sample may not have been true GOTV voters, even though their predicted turnout scores ranged from 0-75. This study was also underpowered (meaning it did not have enough people in it in order to find the expected effect, if there is an effect to find), which may have affected conclusions.

References:

Aron, A., Aron, E. N., & Smollan, D. (1992). Inclusion of other in the self scale and the structure of interpersonal closeness. *Journal of Personality and Social Psychology*, *63*(4), 596.

Haenschen, K. (2016). Social pressure on social media: Using Facebook status updates to increase voter turnout. *Journal of Communication*, *66*(4), 542-563.

Haenschen, K. & Mistry, A. (2018). Networked mobilization: The role of visibility in peer-to-peer mobilization on Facebook. Presented at Political Networks Conference, Arlington, VA, June 2018.

Leary, M. R., Diebels, K. J., Davisson, E. K., Jongman-Sereno, K. P., Isherwood, J. C., Raimi, K. T., ... & Hoyle, R. H. (2017). Cognitive and interpersonal features of intellectual humility. *Personality and Social Psychology Bulletin*, *43*(6), 793-813.