

Is Twitter a Generalizable Public Sphere? A Comparison of 2016 Presidential Campaign Issue Importance among General and Twitter Publics

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ABSTRACT

News media often cite Twitter and other social media metrics as measures of public opinion. This study draws on a quota sample (N=420) of adult American Twitter users to determine the representativeness of the Twitter public in relation to the U.S. general population around 14 issues related to the 2016 presidential campaign, and considers implications for news media coverage of the Twittersphere and other social media populations as representations of the greater public sphere.

CCS Concepts

Human-centered computing→Collaborative and social computing→Collaborative and social computing theory, concepts, and paradigms→Social media

Keywords

Twitter, campaigns, elections, social media, public sphere

1. INTRODUCTION

Despite Lippmann’s assertion that people live in the same world but “think and feel in different ones” [14], news reporting during the mass media era characterized public opinion with generalizable polls that assumed a cohesive public thinking, feeling, and behaving – in the aggregate – as one entity. Of course to some extent that characterization was a natural consequence of the vertical media environment; news media gatekeepers had fewer metrics for gauging public opinion outside of election results, apart from traditional polling. However, with the advent of the information age, and horizontal communications the Internet facilitated among newsmakers and the public, new metrics have evolved for measuring public sentiment around issues and news events, often derived from big data. For example, significant debate analysis during the 2016 U.S. presidential primaries centered on which candidate had added the most Twitter followers [e.g. 3, 23, 26], dominated the conversation on Twitter [e.g. 16, 11], been googled the most [e.g. 22, 5] or managed to trend on Facebook [e.g. 24]. Some news media outlets presented crowd-sourced online

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polls as generalizable data [9]. This became such a notable issue that after the first general election debate, Fox News’ vice president of public opinion research sent out a memo instructing on-air talent to stop touting online polls and start reporting on scientific ones [25].

Use of data points such as these as barometers of public opinion suggests either a tacit understanding that no one “public opinion” exists, or a basic misconception that consensus among one niche public represents public opinion at large. Either scenario presents a potential problem for deliberative democracy. The former assumes that news media consumers understand the limited usefulness of data derived from a small enclave of the public sphere. The latter requires the media to better understand the limits of their own data. While scholars such as Fraser [8] have critiqued the Habermasian ideal of a single public sphere in which public opinion is formed through unrestrained participation and robust deliberation, news media’s continued characterization of public opinion as a monolithic concept derived from a single public sphere has far-reaching consequences. For example, *The New York Times* noted in its debriefing on data’s role in the 2016 presidential election that public misperceptions of the state of the campaign had resulted in part from “how the numbers were presented and how they were understood by the public” [15].

Of course there are tremendous benefits to using social media as a barometer of public opinion. Since the days when Habermas, Lennox, and Lennox wrote that “newspapers and magazines, radio and television are the media of the public sphere” [13], social media and the aggregate data their users generate have allowed researchers to draw conclusions about public opinion from much fuller datasets as opposed to sampling. It’s also faster and less expensive to obtain suggestive data points from social media, search engines and online crowd-sourcing than it is to obtain more generalizable data from a scientific poll. At the same time, that data can be too granular for generalization often implied in news media. For example, looking at the most popular Google search terms during a presidential debate can reveal the topics that piqued the interest of media-literate Google users who watched the debate live, had simultaneous Internet access, and the motivation to conduct a Google search, but cannot represent the inklings of the general population. This in itself is not a novel point. For example, scholars such as Boyd and Crawford [4] have noted that Twitter users do not represent the general public. Others have shown that while volume and sentiment of tweets about political candidates are related to electoral outcomes, the predictive capacity of both falls outside acceptable margins of error for public opinion polling [12]. Nevertheless, such data points continue loom large – and often

uncontextualized – in news media coverage of political events in particular.

While Fraser observed decades ago that social factors have prevented the realization of what she saw as the Habermasian public sphere, and that a “multiplicity of publics is preferable to a single public sphere” [8] conceptually, the information age has presented both new opportunities and challenges when it comes to identifying and delineating those publics. This study takes one such public, the Twittersverse, and aims to determine its representativeness of the U.S. general public around issues related to the 2016 U.S. presidential campaign.

2. RESEARCH QUESTIONS

To determine Twitter’s representativeness of the general population in the context of campaign issue salience, this study aims to answer two questions:

- 1) Which 2016 presidential campaign issues were most important to adult Americans on Twitter?
- 2) How generalizable was public opinion on Twitter to that of the general American population with respect to the importance of those campaign issues?

3. METHODS

To determine issue salience among the U.S. adult Twitter-using public, Qualtrics was commissioned to conduct a quota-sampled survey (N=420) of U.S. adult Twitter-users between October 19 and October 27, 2016.

3.1 Independent Variable Measures

The independent variables were active (at least once per week) use of Twitter and preferred presidential candidate. This allowed issue salience to be considered in respect to both.

3.2 Dependent Variable Measures

Because the salience of issues rather than positive or negative attitudes toward them is a hallmark of agenda-setting research [7] the dependent variables were conceptualized here as salient issues of the 2016 presidential campaign. To measure their perceptions of salient issues, respondents were asked to consider the importance of 14 campaign issues using sliders across a 11-point scale from “Not important at all” (or 0) to “Extremely important” (or 10). The 14 issues were derived from Pew Research Center’s national public opinion poll on the same topic [18]. Alphabetically, those issues are: 1) abortion, 2) economy, 3) education, 4) environment, 5) foreign policy, 6) gun policy, 7) healthcare, 8) immigration, 9) social security, 10) supreme court, 11) terrorism, 12) trade, 13) treatment of gay, lesbian, and transgender people, and 14) treatment of racial and ethnic groups. Participants who rated those issues “Moderately important,” “Very important,” or “Extremely important” were then presented with a text box and asked to elaborate on their biggest concern about each issue. These two measures were meant to elicit the first- and second-level issue agendas salient among respondents.

3.3 Control Variable Measures

The control variables were seven demographic factors that Pew Research Center collects in its own public opinion polling. These were race, gender, educational attainment, party registration, political views, annual income, and age.

3.4 Sample Development and Descriptives

While Twitter does not collect or share its own demographic make-up, the author developed an estimate of its adult American

population using Pew Research Center’s Twitter demographics survey [20], which reports percentages of racial, gender, and age groups from the U.S. general population who use Twitter, and then cross-referencing those percentages with U.S. Census data to estimate the proportional make-up of Twitter for each variable. Those rough proportions were used as the basis for quota sampling implemented here. After receiving approval from the Institutional Review Board, the author contracted Qualtrics to recruit respondents. To assemble the panel, Qualtrics sent emails to potential respondents inviting them to take the survey. To avoid self-selection bias, invitations did not mention the specific content of the survey. Digital fingerprinting prevented duplicate responses and standard quality controls within the survey ensured conscientious participation [21]. About 40% of respondents were male; 60% were female. About 1% said their highest completed level of education was some high school; 14% had high school diplomas; 24% had completed some college; 44% had graduated college; 4% had completed some graduate school and 14% more had completed a graduate degree. 50% were Democrats, 21% Republican, and 20% independent. About 20% of respondents fell into each age group, 18-29, 30-39, 40-49, 50-59, and 60 or above. 53% were white, 23% black or African American, 18% Hispanic/Latino, 2.5% Asian or Asian American, and 2.5% other. About 20% reported making \$25,000 or less annually; 26% made \$25,000 to \$50,000; 37%, \$50,001-\$100,000; 16%, \$100,001-\$250,000; and 1%, \$250,000 or more.

4. ANALYSIS

Results were compared to Pew Research Center’s “Top Voting Issues in the 2016 Election” [18] and Gallup’s “Election Benchmark Survey” [10]

5. FINDINGS

5.1 Campaign Issue Salience on Twitter

The relative importance of the 14 campaign issues measured here for voters on Twitter mirrored the relative importance of those issues for the general public. The table above shows how important voters considered each issue as well as the standard deviation for each. The table below compares Pew’s findings – in order from biggest concern to smallest – to those gleaned from this survey. One notable difference is the placement of immigration, sixth in Pew’s survey and eleventh in this one. A possible explanation for that difference is the disproportionate response rate of Clinton supporters to the survey. Another possible explanation is that Democrats comprise a larger percentage of Twitter users than Republicans do. However, the proportion of Democrats to Republicans in the sample does not seem to have effected other rankings.

Table 1: The importance of 14 campaign issues to U.S. adult Twitter users.

Issue	Mean	Std. Deviation
Economy	8.75	1.55
Healthcare	8.71	1.54
Terrorism	8.16	2.2
Social Security	8.14	1.96
Education	8.07	2
Gun Policy	7.88	2.13
Foreign Policy	7.69	1.99
Supreme Court	7.59	2.18
Treatment of Racial and Ethnic Groups	7.52	2.68
Environment	7.37	2.44

Issue cont'd	Mean cont'd	Std. Dev. cont'd
Trade	7.13	2.14
Immigration	6.97	2.51
Abortion	6.51	2.87
Treatment of Gay, Lesbian, and Transgender People	6.39	3.12

5.2 Twitter’s Generalizability

There was the most consensus among all respondents on the importance of healthcare and the economy as campaign issues, where standard deviations were 1.54 and 1.55, respectively, on an 11-point scale. There was the least consensus about the importance of hot-button social issues such as abortion, treatment of racial and ethnic groups, and treatment of gay, lesbian, and transgender people, the last of which scored the highest standard deviation of all 14 issues polled at 3.12. This is unsurprising considering the vast partisan divides on social issues throughout the campaign, such as the merits of the Black Lives Matter movement or North Carolina’s controversial HB2, a law that required transgender people using public restrooms to choose the one of their sex at birth.

Like an earlier Gallup poll on presidential campaign issues [10], this one included an open-ended question asking respondents to name the most important campaign issue to them. Because Gallup’s responses include both broad campaign themes (e.g. the economy) and specific campaign issues (e.g. taxes), this study disentangles those first- and second-level agendas by examining each group independently.

Overall, participants in both Gallup’s poll and this survey prioritized broad campaign themes with relative similarity. There are some conspicuous differences, such as the high placement of immigration in Gallup’s results or the high placement of Social Security in these. Nevertheless, there are comparable hierarchies of issue order evident among the Twitter public and the general population(s) according to Gallup and Pew. A Spearman rank correlation showed significance in relative issue salience between Pew and Twitter respondents ($r = 0.81978, p = 0.00033$) and between Pew and Gallup respondents ($r = 0.78022, p = 0.00099$). There were also hints of that same pattern when it came to second-level agendas, or the specific issues through which voters perceived the broader campaign themes. For example, the three most important specific economic concerns among write-in answers from both Gallup and Twitter participants were jobs, debt, and taxes, in that order.

6. DISCUSSION

This study finds that Twitter mimicked the U.S. general population represented in Pew and Gallup polls in its relative prioritization of 2016’s most important campaign issues. Across all three surveys, participants ranked the same themes—the economy, healthcare, and terrorism—among their greatest concerns, and ranked trade, abortion, and LGBT rights among their least. While differences between proximal categories such as terrorism (mean = 8.16) and Social Security (mean = 8.14) in the Twitter sample were insignificant, the comparable positioning of issues at the top and bottom of each of the three surveys’ spectrums suggests that views of the Twitter public on the relative importance of presidential campaign issues were generalizable to national public opinion in the rough aggregate.

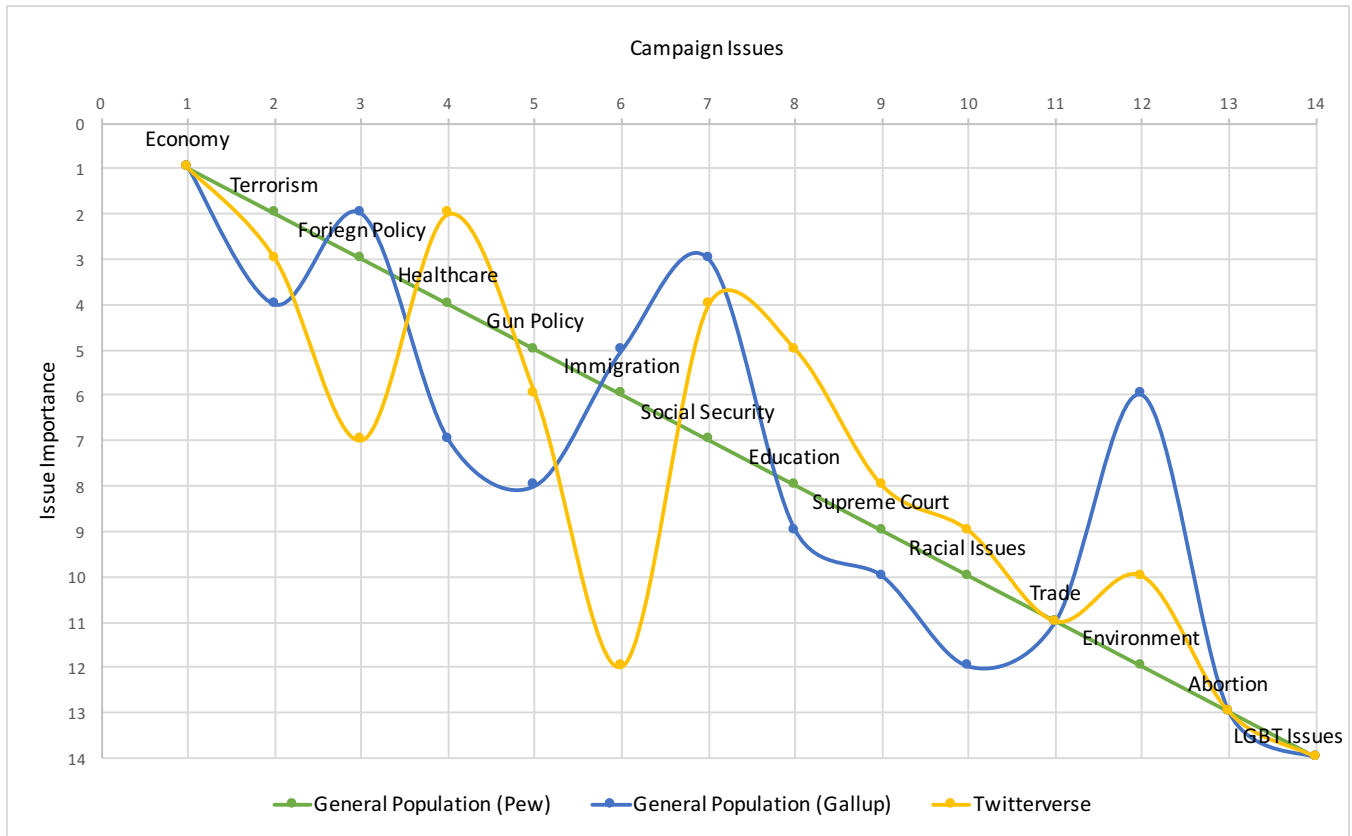


Figure 1: Three estimates of relative issue salience. Because Pew data informed this study’s coding categories, it appears above as the basis for comparison.

This makes at least two specific contributions to existing literature on Twitter data as measures of public opinion. First, it suggests a new avenue for developing more representative Twitter panels. Because one of the biggest challenges of recruiting a generalizable sample are the skewed demographics of Twitter (expanded in the limitations section), other scholars have suggested post-stratification of samples [2, 6], weighting demographic groups according to their size relative to the general population. Results here show that quota sampling could be a useful alternative to post-stratification, allowing researchers to recruit large enough respondent pools during data collection to prevent over-extrapolation from under-representative samples later. Second, it suggests that some of the inherent challenges of Twitter data, such as discerning likely voters or recognizing political astroturfing [12] can be overcome methodologically.

At the same time, news media crowd-sourcing from their own Twitter accounts or searching hash tags or Twitter’s API to track chatter around campaign issues are not implementing those methods. Data gleaned from metrics such as the number of Twitter followers a candidate has or adds after a campaign event, or the chatter on Twitter about him or her measured as a hash tag or trending topic and extrapolated to suggest national public opinion is quicker and less expensive to obtain than scientific polling. However, these methods are problematic for several reasons. First, they can never be representative of the general population without methodological rigour that would negate its cost-effectiveness. Second, they ignore factors that could skew the data such as demographically disproportionate adoption of social media or the curation or sponsorship of trending topics on Twitter and other networking sites. Finally, they overlook the potential of Twitter and other social media to illuminate both subtle and dramatic differences in the thinking of various segments of the population. As Papacharissi observes, “the term public sphere cannot capture the potential of civic activities that develop around social media in its entirety” [17].

It could be more useful, in the age of fragmented information streams and selective exposure, for news media to adopt the position of scholars such as Fraser: that drawing on the deliberations of “a multiplicity of publics” [8] provides a more comprehensive picture of public opinion, or rather of the opinions of various groups. Abandoning the old Habermasian idea of a single public sphere and embracing Fraser’s concept of “competing counter-publics” [8] could help news media better explain electoral outcomes – such as Trump’s surprise 2016 victory – that seem to be at odds with their frequent depiction of polls as definitive reflections of monolithic public opinion. It could also open the door to more and better reporting on various social media publics which could in turn offer a richer view of our political media ecology.

7. LIMITATIONS

The surveys examined here were conducted at differing points in the campaign—the Gallup poll in winter 2016, the Pew poll in summer 2016, and this study in fall 2016. As a result, it is not clear whether relative differences in the rankings of particular issues across all three surveys result more from differences in data collection techniques or from issue salience at each of those points in the campaign. Furthermore, the percentage of Democrats in this study’s respondent pool was

more than twice that of Republicans. While Republicans are underrepresented on Twitter [2] this is a large partisan gap. That this study examined topical importance rather than partisan positions, however, and that results were consistent in the aggregate with those of both Pew and Gallup, suggests neither limitation was decisive in the outcome. Finally, because news media often use Twitter metrics to infer the state of political horse races, it is also important to emphasize that this study tests Twitter’s reflective – not predictive – capacity.

8. CONCLUSIONS

This paper has examined Twitter’s representativeness of the U.S. general population on 14 presidential campaign issues. It demonstrates that opinions of the adult American Twitter population about the importance of 2016 campaign issues can be generalized to the American population at large. At the same time, it reveals that doing so added few new insights to the results of more scientific polling that Gallup and Pew conducted, and required a deliberate sampling method that political news media did not implement in their suggestive coverage of social media as a barometer of public opinion during the 2016 campaign. This paper therefore concludes that Twitter is better used to supplement rather than to approximate other measures of public opinion, and that political news media should heed Anstead and O’Loughlin’s advice to “think less about a singular public opinion and more about the opinions of various publics” [1].

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