

Trump, Twitter, and news media responsiveness: A media systems approach

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Abstract

How populists engage with media of various types, and are treated by those media, are questions of international interest. In the United States, Donald Trump stands out for both his populism-inflected campaign style and his success at attracting media attention. This article examines how interactions between candidate communications, social media, partisan media, and news media combined to shape attention to Trump, Clinton, Cruz, and Sanders during the 2015–2016 American presidential primary elections. We identify six major components of the American media system and measure candidates' efforts to gain attention from them. Our results demonstrate that social media activity, in the form of retweets of candidate posts, provided a significant boost to news media coverage of Trump, but no comparable boost for other candidates. Furthermore, Trump tweeted more at times when he had recently garnered less of a relative advantage in news attention, suggesting he strategically used Twitter to trigger coverage.

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Attention economy, Breitbart, Clinton, Cruz, hybrid media, populism, populist, Sanders

The relationship between the growth of populism in Latin American, Europe, and the United States and the development of the digitized communication system is a topic of great interest to scholars of communication and politics (Mazzoleni, 2008). Amid a lively research paradigm, scholars have examined populist rhetoric (Oliver and Rahn, 2016), uses of social media (Engesser et al., 2017a), and treatment in the press (Bos et al., 2011; Schmuck et al., 2017). We build on this work by examining how different components of the hybrid media system responded to the leading candidates of the 2016 American presidential primary elections, which featured two candidates—Donald Trump and Bernie Sanders—noted for populist qualities. In this, we address a gap highlighted in a recent special issue on the topic of populist political communication (De Vreese et al., 2018).

Our specific focus is on how attention generated by Donald Trump, Ted Cruz, Hillary Clinton, and Bernie Sanders was amplified and spread among diverse sectors of the media ecology during the primaries in 2015–2016. Trump is an especially intriguing case, as a candidate who exhibited several populist predilections and received a disproportionate share of attention from news media (Patterson, 2016). Research investigating how this heightened attention developed has shown, for example, the range of attention-getting resources from which Trump benefited (Wells et al., 2016). Here, Sanders stands as a counterpoint, a candidate who displayed traits of left-wing populism, but did not receive the outsize attention Trump enjoyed, nor win his party's nomination (Oliver and Rahn, 2016).

We take a novel, media system-oriented approach to explore questions about how populists generate attention in a diversified and fragmented media ecology. First, we situate Trump and Sanders in the context of each party's nomination process, by also considering the mechanisms by which their principal rivals, Cruz and Clinton, attracted attention. Second, we disaggregate what is often referred to simply as the "media system" by typologizing six distinct clusters of media outlets in the United States, from left-wing to centrist, right-leaning, and populist-inflected right-wing media outlets. This enables us to build a more refined picture of how "the media" responded to the candidates. Finally, we consider the social media behavior of the candidates and their supportive online publics, and how that behavior related to media attention.

American populists?

The notion and nature of "populism" is a contested one even within the European sphere in which it is receiving the most thorough examination (Mudde, 2004). In some ways, applying the term in the United States is even more problematic. Unlike many European countries, which have political parties that can readily be identified as populist, the American two-party system largely circumscribes this possibility; Trump, of course, won as a Republican, and Sanders eschewed his independent label in the Senate to run as a Democrat. Both thus had a complicated mix of insider and outsider traits.

Yet the two candidates did exhibit a number of the most-agreed upon elements of populism. Both were notable for their consistent attacks on elites (Mudde, 2004), though their depiction of who the elites were and what they were doing diverged widely. Trump's version doubled down on the anti-“cultural” elite that has been the target of Republican politicians and conservative media for decades (Peck, 2019): coastal liberals, the Washington DC establishment, and people associated with news media. In a move out of the playbook of right-wing populism, he rhetorically paired attacks on this elite with ostracism of key groups he portrayed as threats—most of all, immigrants and people from the Middle East. In doing so, he explicitly called out the concept of an American “Heartland” (Engesser et al., 2017a) and promised its renewal under his leadership (“Make America Great Again”). Trump thus fills out all three of the characteristics of Jagers and Walgrave's (2007) notion of “thick” populism. Further stylistic notes characterized Trump's campaigning, especially his regular violations of political norms, vernacular communicative style, and criticism of news media (De Vreese et al., 2018), all of which served to underwrite a Manichean view of political legitimacy (Waisbord, 2018).

Typical for a left-wing populist, Sanders' anti-elitism was directed at economic elites and corporations, whom he characterized as standing in the way of average Americans fulfilling their needs in education, healthcare, employment, and other domains (Oliver and Rahn, 2016). However, contra Trump, Sanders' anti-elitism was not paired with either the demonization of any “horizontal” groups (Engesser et al., 2017a) or a strongly evoked “Heartland”; his appeals for economic solidarity portrayed its benefits to a pluralistic, diverse society. In Jagers and Walgrave's (2007) framework, Sanders might then be more on the “thinner” end of the populist scale, though his solidly crafted persona as a candidate standing up against enormous elite forces—and being outside the mainstream of the Democratic party—goes a bit beyond their purely “thin” formulation. Notably, Sanders' appearances also lacked the norm violations and media attacks for which Trump became so well known.

Populists and the press

Our examination of how Trump and his rivals fared at attracting attention in the hybrid media system can be situated within several bodies of literature: the treatment of populist actors by the press, the wider logics of the hybrid media system and attention economy, and specific components of the American communication system. We take these in turn before proposing research questions.

Waisbord (2018) sees an “elective affinity” between conditions of 21st century public communication and the resurgence of (especially right-wing) populist movements, parties, and politicians—and the “post-truth” communication they often embrace. The circumvention and manipulation of traditional, centralized, and elite gatekeeping that characterized the Post-World War II media systems of the West “has ushered in new, multilayered forms of news sharing and engagement” (p. 6). Now joining traditional journalistic organizations are news commentary and information-aggregating outlets catering to all tastes and preferences—and depictions of social reality (van Aelst et al., 2017). Populism's understanding of politics fits with these communicative conditions: accepting a priori the correctness of their view, communication becomes not a collective

search for truth or attempt to establish deliberation or compromise, but a power-defining arena to be manipulated.

Attending to how this occurs in three communicative domains—news treatment of populists, online partisan media, and social media—will help us to illustrate the current conditions of populist political communication.

Legacy news media and populists

As Schmuck et al. (2017) point out, for many European populist parties (e.g. Austrian Freedom Party), attaining coverage in the mainstream press has been a central goal since well before social media. Mainstream coverage confers legitimacy on populists as relevant actors in public discussions and helps spread their message to new audiences (Mazzoleni, 2008). This has given rise to a complex relationship: populists have assiduously courted press attention, while simultaneously criticizing, and being critiqued by, the press (Mudde, 2007). Several features of this relationship are worth noting. First, many Western news media exhibit features that can themselves be described as populist, in style if not in ideology (Esser et al., 2016): anti-elitism, a celebration of “the people” in opposition to larger institutional forces, routinized criticism of public officials, and heightened interest in public affairs scandals (Mazzoleni, 2008; Wettstein et al., 2018). There are clear echoes here of the reflexive and ritualized criticism of policy-makers of which the American and British presses have been accused (Cappella and Jamieson, 1997; Wayne and Murray, 2009). One result may be publics receptive to populist appeals owing to years of depictions of elite underperformance and malfeasance.

Second, populists often gain leverage from coverage in the press even if the coverage is largely negative in tone. This has been demonstrated in multiple contexts, including Sweden and Switzerland: as Esser and colleagues (2016) note, “The positive effects of increased visibility appeared to have trumped the negative effect of the tone of the coverage” (p. 366). This seeming paradox appears to have several explanations. One is the predilection of most Western journalistic traditions for covering the novel, unusual, and conflictual, which populists have become expert at providing (Moffitt, 2017). Another is the increasing importance of attention in Western public spheres that have periodically become fixed around flamboyant populist leaders (Krämer, 2014). In combination with growing distrust of the press in some countries and anti-elitist sentiment in many, enhanced attention to populist actors, who often respond to negative coverage with attacks on the press as agents of a corrupt status quo, can enhance their status with sizable audiences (Hahl et al., 2018; Mazzoleni, 2008).

Third, how commercial media logics lead news organizations to devote disproportionate attention to populist actors and populist narratives is an important area for investigation. Krämer (2014) and Mudde (2007) argue that tabloids and a broader increased attentiveness to profitability have contributed to an increasingly populist style, and perhaps even attention devoted to populists, among European news media. Systematic empirical analyses comparing tabloids with quality news media (Akkerman, 2011; Hameleers et al., 2017) have been more equivocal; the larger question of how financial imperatives shape news treatment of populists is far from answered. In the case of Trump

there are significant questions about the role that heightened attention to audience metrics played in driving coverage of him (Pickard, 2017).

Partisan media support

Furthermore, the “news media” that make up the contemporary media system is no monolithic entity; the journalistic outlets that were once the core of Western polities are now joined by highly partisan ones with a variety of forms of backing and goals, including profit-seeking efforts to reach niche polarized audiences, political hobby-horses, and combinations of the two. Such media support, in partnership with heavy social media activity, interaction, and amplification, can be vital to structuring the campaigns of populist actors and parties (Engesser et al., 2017a; Schmuck et al., 2017).

Given the potential importance of partisan, populist media, there is too little research yet published on the topic. In the United States, whose generation of such outlets is especially advanced, the unparalleled example of 2016 was Breitbart, which rose from relative obscurity to challenge Fox News as the standard-bearer of conservative opinion (Faris et al., 2017). Breitbart’s coverage preceding the 2016 election was unabashedly populist, routinely criticizing elites (including Democrats and establishment Republicans) and many media, including Fox News, which it portrayed as corrupted by Republican elites and insufficiently supportive of Trump.

Populists and social media

It should not be surprising that political actors who until recent years were marginal players in legislative bodies and public debates would embrace opportunities to circumvent the constraints and editorial control of journalistic media (Groshek and Engelbert, 2013). As Engesser and colleagues (2017a), among others, have shown, the prolific and often effective use of social media by populist actors is a common finding across national contexts. Aside from being able to sidestep journalistic gatekeepers (Engesser et al., 2017b), interactivity on social media and an often-combative discursive style lend themselves to on-brand populist messaging (Mazzoleni and Bracciale, 2018). All of these were on frequent display in Trump’s own Twitter use (Pelled et al., 2018).

In addition to a direct channel of promotion for populist leaders, social media have proven to be fertile ground for the development of communities of populist, ethnonationalist, and anti-establishment sentiment (Kemmers et al., 2016; Krämer, 2014). These dynamics were prominent in 2016 election, when trolls, gamers, and Alt Right supporters on 4chan and Reddit supplied memes and other content for Trump supporters in more mainstream sites such as Twitter (Musgrave, 2017). In a hybrid media system, this makes the tight connection between news and social media into a battleground for control of ideas, symbols, and representations of public sentiment that is well—perhaps best—understood by political actors from the populist right (including the American “Alt Right”; Marwick and Lewis, 2017; Zhang et al., 2017).

Nearly as intriguing as the success of the trans-national political right in developing organs of communication, and translating networked movements into political power (Stier et al., 2017), is the failure on the left to do so. A mere few years ago, networked

social movements around the globe (such as Occupy Wall Street and Los Indignados) were injecting left-leaning, quasi-populist sentiments like inequality into public discourse. But unlike its conservative and often nationalist counterparts, the left has largely failed to convert movement energy into institutional power (Bennett et al., 2018). Bennett and colleagues (2018) connect this divide in part to “the popular meta-ideology of diversity and inclusiveness and demands for direct or deliberative democracy” on the left, in contrast to desires for clearer and more hierarchically rendered moral, organizational and, increasingly, national/ethnic boundaries on the right.

One important area for investigation is how these differences in political style translate into the realm of the social–broadcast media nexus: one wonders if the blunt politics of right-wing populists is conveyed much more effectively to receptive audiences over Twitter and bite-sized headlines than the intricate compromises left-wing populists have to embody.

System-thinking in communication research

The prior discussion outlines three parts of a media ecology that populist communicators enter and circulate. Although useful analytically to separate them, partisan outlets and social media influence and compete with one another. Two concepts that aid us in conceptualizing these interactions are the hybrid media system and the attention economy.

The hybrid media system

Chadwick (2017) notes that systems are made of relationships between components, and that the hybrid media system includes traditional media actors such as journalists and news organizations; those seeking to shape news coverage, such as politicians and social movements; and those using digital technologies to insert themselves into communications to provide political commentary and partisan viewpoints. Today, older actors and logics hybridize with new ones (see also Williams and Delli Carpini, 2011), and new categories are emerging in response to evolving patterns and opportunities.

Systems also tend to have regulating mechanisms that keep them in relative stasis, as well as a mix of “inherent complexity, instability, and messiness” (Chadwick, 2017, p. 16). This volatility is a product of systemic change, as well as the fact that in many systems—including media systems—elements are both in strident competition and heavily dependent on one another. This quality is highlighted by the tempestuous relationship between news organizations and the social media platforms on which much of their content is shared.

The attention economy

Attention is increasingly recognized an essential resource for individuals and groups wishing to exercise political or social influence in many contexts: governmental policy-making, news agenda setting, and social movement organizing (Conway et al., 2015; Freelon et al., 2016; Jones and Baumgartner, 2005; Walgrave et al., 2017). And if the

hybrid media system framework describes the constituent elements of the media system and their interactions, theories of the attention economy focus on attention as a primary currency of that system—that is, the substance being exchanged (Goldhaber, 1997; Webster, 2014).

Notably, and especially interesting in the context of news media coverage of norm-breaking populists, the attention economy perspective has tended to focus on *quantity* of attention, rather than its *quality*. This makes for a parsimonious approach and also reflects a sense that any attention may be positive attention—in line with the quote above from Esser et al. (2016). Indeed, the ability to generate attention is critical in political campaigns, particularly for unconventional candidates and in crowded fields, where the news media's attention is divided (Canon, 1990; Shah et al., 1999).

This raises the stakes of editorial decisions about whom to cover, with past practice leading journalists to cover candidates in line with their incumbency, standing in the polls, success at raising campaign funds, and candidates' gender (Kahn, 1994). Moreover, the American press' commitment to balance in political reporting often leads to equalization of coverage among leading contenders. In this sense, the disproportionate news coverage of Donald Trump in 2015 and 2016 constituted a deviation from the norm (Patterson, 2016).

We ask how this came to be, focusing on how Trump and his rivals gained attentional advantage within the media system. Our analyses below take into account the many techniques—participation in debates, staged events, media appearances, and social media activity—on which candidates draw to get and maintain attention.

The American political-media system

The preceding discussions of populists' interactions with various media forms, the hybrid media system, and the attention economy can be integrated to build our understanding of the contemporary US media landscape. Over a couple of decades, that landscape has seen fragmentation and proliferation: especially notable is the growth in partisan news outlets, beginning with the development of right-wing talk radio in the 1980s, conservative cable news like Fox News in the 1990s, and a rash of extreme online outlets in the early 2000s, of which the avowedly populist Breitbart (begun in 2010) and conspiracy-oriented InfoWars (a spin-off of Alex Jones' talk radio show) are among the most prominent (Berry and Sobieraj, 2014; Ladd, 2011).

On the left, a handful of prominent blogs (e.g. Daily Kos) and online-only news organizations (e.g. Huffington Post) offer something of a counterweight to the right-wing; MSNBC also took a more liberal editorial position in the 2000s, mimicking larger trends of polarization among elites and publics. However, as Faris and colleagues (2017) show, these outlets remain closely tied to mainstream core journalistic institutions in ways the far-right newcomers do not.

The political economy of the American digital communication system is also highly significant, as it has challenged the advertising revenue models of profit-oriented journalism (Schlesinger and Doyle, 2015). With social media platforms becoming the primary online interface for millions of users, actors of all types are recalibrating their activities to optimize the distribution of their stories in online

domains, capitalizing on the ad revenue each click generates—classic attentional economics (Karpf, 2016).

As Karpf (2016) notes, this click-driven content production logic now permeates all forms of digital media production, including traditional news. The most significant recent entrants into newsrooms are not any human agent, but metrics: the ability to gauge what types of content are succeeding, on the homepage and in the contested domain of social media (Lecheler and Kruikemeier, 2016; Parmelee, 2014).

As the measurement of audience metrics becomes a crucial link between social media publics and media outlets developing and delivering content (Schlesinger and Doyle, 2015), social media become a live barometer of what topics are percolating in the public mind, or at least among the influential people who actively share and consume information via social media. Journalists and editors are often desperate to find “hooks” to attract audiences and deliver pageviews and clicks to advertisers. The result is a constant monitoring, via countless social media tracking services, of both journalistic products and the social media streams they are swept into (McGregor and Molyneux, 2018).

Attention cycles of the 2016 election

These dynamics were on prominent display in the 2016 American presidential election. Although he ultimately won the nomination of a major political party, Trump’s primary campaign began as something akin to a European fringe party. Equipped with instincts for drawing and sustaining audiences’ attention—honed over decades spent courting public attention, and more recent forays into speaking at massive rallies (Oliver and Rahn, 2016)—Trump’s campaign played perfectly to the communicative environment described, offering regular doses of sensationalism, novelty, and outrageous statements across multiple media. For his part, Sanders ran an upstart insurgency against Clinton and the bulk of the Democratic establishment. Building on the participatory ethos of Obama’s run 8 years before, Sanders ran hard against elites of many kinds—in the nation and in the Democratic party.

It was to Trump that the wider media ecology responded: Trump received more attention from journalists than any opponent, even chief rivals, often by a factor of two or three. During the primary, “there was not a single week when Ted Cruz, Marco Rubio, or John Kasich topped Trump’s level of coverage” (Patterson, 2016). This massive volume of “earned” coverage allowed Trump to spend much less than opponents on advertising, supporting his effort to win the primary and general elections. One election postmortem estimated that Trump garnered \$4.96 billion in free coverage compared to Clinton’s \$3.24 billion, outpacing her in every medium (Bump, 2017). Media attention to Sanders trailed substantially, especially early in the primaries, before his campaign was recognized as a genuine threat to Clinton.

Research questions

We are interested in understanding how different components of the American media system allocated their attention among the four leading candidates during the primaries. Taking our cue from the attention economy framework (Webster, 2014), our focus is not on *how* Trump, Cruz, Clinton, or Sanders were covered, but in their ability muster *attention*. In particular, we aim to understand how two candidates delivering messages with

discernable populist features (Groshek and Koc-Michalska, 2017) generated attention from different parts of a polarized media environment, and whether those processes differed from one another and from the other, non-populist candidates.

We thus articulate three research questions that center on the responsiveness of the media system to the four candidates:

RQ1. How did sectors of the media system differ in the attention they provided to the candidates?

RQ2. Were different sectors of the media system responsive to different attention-attracting techniques?

RQ3. How did the candidates differ in the mechanisms by which they were able to attract media attention?

In this, we build on previous research by Wells et al. (2016). That study assessed the factors leading to coverage of Trump among several mainstream news media outlets. We improve on that work by (1) considering attention to multiple leading candidates of the 2016 primaries, (2) disaggregating the media system to investigate the behavior of *different media types*, and (3) including measures of each candidate's polling standing at each point in the campaign, to better control for overall popularity.

Method

To model patterns of attention to Trump, Clinton, Cruz, and Sanders, we constructed a data set that included measures of the major attention-getting events and practices of a primary campaign:

- Counts of news stories about Donald Trump, Ted Cruz, Hillary Clinton, and Bernie Sanders, from key news outlets, which served as our dependent variables;
- An event timeline that took account of debates, staged events, and media appearances—both planned and impromptu—for each candidate;
- Counts of candidates' tweets;
- Counts of retweets of the candidates' tweets;
- The candidates' nationwide popularity as measured by aggregated opinion polls.

Each variable was recorded for each day starting on June 16, 2015—the day Donald Trump announced his candidacy, and thus the first date at which all four candidates were in the race—and ended May 4, 2016—the day John Kasich dropped out of the race, handing the Republican nomination to Trump.

News stories

We created daily counts of articles about each of the four candidates—Donald Trump, Ted Cruz, Hillary Clinton, and Bernie Sanders—defined as mentioning the given candidate at least twice in a story. Our reasoning was that a single mention of a candidate may occur in

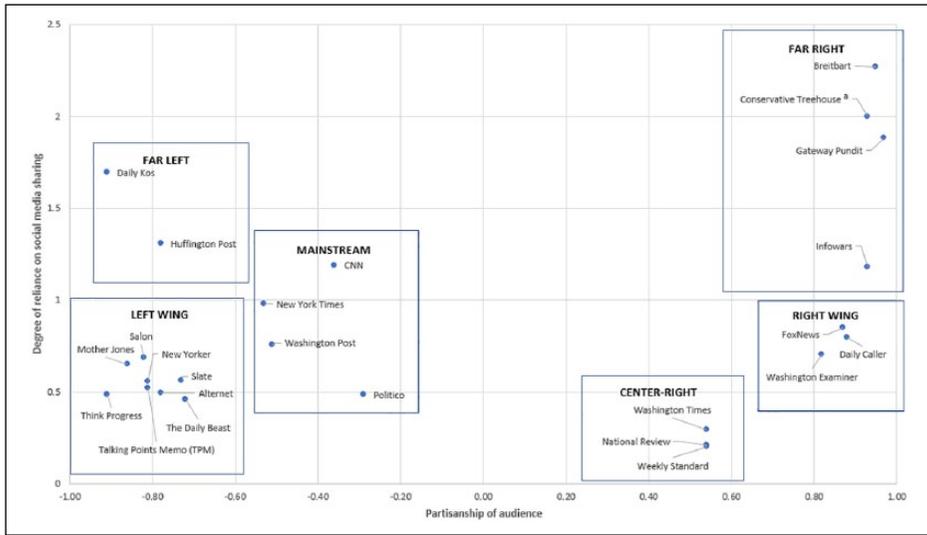


Figure 1. Categorization of 24 American media outlets.

Quantitative placements based on data from Faris et al. (2017).

^aApproximate y-axis location of Conservative Treehouse.

passing in an article, but a candidate mentioned twice was likely receiving more attention.¹ We collected articles from MediaCloud (<https://mediacloud.org/>), a platform storing word occurrence frequencies of articles from tens of thousands of news outlets.

To construct our sampling frame, we aimed to, first, characterize outlets by partisanship and, second, contrast “legacy” outlets to those centered in social media (cf. Guo and Vargo, 2018). Faris et al. (2017) present data making it possible to do both. First, their study gauged the partisanship of news media audiences based on social media behavior. Second, they quantified the extent to which outlets’ articles were shared through social media, and the quantity of inlinks each outlet attracted from other news outlets. We used these two linking scores to create a ratio of each outlets’ relative attention from within social media (specifically Facebook and Twitter) as opposed to other media outlets linking to them on the web. We conceptualized this measure as a gauge of integration with the traditional versus the social media ecosystem: that is, the more the references to an outlet were coming from social media and not traditional media, the more we suspected it to be reliant on social media-directed attention. The more an outlet received links from traditional media, the more we suspected it was part of a traditional, legacy news ecology. Finally, we selected 24 major media outlets based on (1) their prominence in the American political-media system, (2) their dispersion across the two dimensions just described (see Figure 1), and (3) the completeness of data available on their daily coverage. In analyses below, daily measures of coverage within each category are constructed by averaging the daily counts of that category’s constituent outlets, as displayed in Figure 1.

Event data

We used multiple timelines from news organizations and candidate-affiliated webpages to develop a timeline of events for each of the four candidates. This was important to account for the conventional “information subsidies” campaigns produce to attract press coverage (Gandy, 1982). These included timelines from the Washington Examiner, Reuters, CNN, Newsday, NPR, USA Today, People magazine, and a Trump support group. To ensure the significance of all events mentioned, each event was also validated by checking other news outlets; just over 20 events were removed because they appeared on only one timeline or outlets were inconsistent about the dates of the events. The events we identified were grouped into four categories:

1. *Planned public events.* These included campaign rallies, town hall meetings, and other coordinated interactions with the public.
2. *Planned media events.* These events included organized media appearances such as press conferences and scheduled interviews.
3. *Unplanned media events.* Based on Trump’s common practice of calling in to radio and television shows, we accounted for unplanned media appearances by the candidates.
4. *Republican/Democratic primary debates.*

Twitter data

The Twitter accounts used in this study are: Donald Trump (@realDonaldTrump), Hillary Clinton (@HillaryClinton), Ted Cruz (@SenTedCruz, @tedcruz), and Bernie Sanders (@BernieSanders, @SenSanders). Note that whereas Trump and Clinton used only one account each, Sanders and Cruz each used two accounts during the campaign; we tracked both and combined them in measurement.

We retrieved all tweets from the four candidates’ accounts from the data provider Crimson Hexagon. That is, we requested all tweets posted by the six relevant accounts during our sample period. The data were returned to us and stored as CSV files containing one tweet per row. Metadata stored included time of posting the tweet and many other features.

We retrieved retweets of candidates’ tweets from an archive of tweets collected through the Twitter Streaming API, which Twitter describes as an approximately 1% random sample of global tweets. There has been some discussion about the randomness of tweets selected for Twitter’s “garden hose” sample (e.g. Morstatter et al., 2013), so we conducted cross-validations of our data. First, we compared the series of daily retweet counts for Trump to a comparable series of counts from Crimson Hexagon and found a $r = .99$ correspondence, and only slightly lower correspondences for the other candidates. Second, we compared 1% Streaming API data and purchased 100% “Firehose” data during the first and third presidential debates of 2016, this time comparing counts of tweets mentioning “Trump” and “Clinton” within specified time intervals. Even at granularities as small as 10-second intervals, the correspondence in counts is high ($r = .95$), and at 45-second intervals it is nearly perfect ($r = .99$), suggesting that at least for the types of

aggregate measures we are using (daily counts of retweets), the 1% sample approximates Twitter as a whole extremely closely.

To count retweets, we identified retweets of tweets of each of the six handles of interest, and generated a daily count of the number of retweets received by each candidate, each day. (For candidates with two accounts, retweets from both accounts were added together.) On 28 of the days in the series, our archive received no data from Twitter. Counts of retweets on these days were replaced by linear imputation in cases of two or fewer missing days; for two longer stretches, we used a vector autoregressive model of each candidate's retweet values to forecast the missing values. As a robustness check, we also tested the models with missing days removed and found nearly identical results.

Public opinion data

We collected the HuffingtonPost/Pollster poll average for each candidate, on each day of our time period (for Trump & Cruz: <https://elections.huffingtonpost.com/pollster/2016-national-gop-primary>; for Clinton & Sanders: <https://elections.huffingtonpost.com/pollster/2016-national-democratic-primary>). Where a candidate's poll standing on a given day was missing because of lack of polls that day, we performed linear imputation using existing data points.

Results

We modeled the coverage of Trump relative to Cruz and Clinton relative to Sanders by each category of media organization with time-series regression models using Prais–Winsten estimation. To focus our analysis on the extent to which each gained coverage exceeding that of their main primary opponent, we calculated *net advantage variables* by subtracting each candidate's coverage count in each media category from their opposing candidate's coverage count. This enables us to control for baseline levels of attention to each primary campaign. We did this for all major events, social media posts and retweets, and public opinion standing. For example, we calculated Trump net advantage in public opinion polls by calculating Trump's poll rating—Cruz's poll rating on each day of the sample.

In seeking to explain news media attention to candidates, we faced the problem that we do not well know how long it is likely to take for a given impulse—the attention-generating mechanism—to have its effect, in this case in news media attention. Given the relatively open-ended nature of knowledge on the topic at present, we specified our models to test three possibilities of “lag” in the dependent variable. First, we specified “no lag” models that included measures of all variables on the same day. This gives an indication of daily co-occurrence of the variables. Second, we specified “one-day lag” models in which independent variables predicted dependent variables the *following* day. This gives us some leverage over the direction in which effects are flowing. Third, we specified “two-day lag” models in which dependent variables were projected two days into the future. We added this specification out of suspicion that a “signal” emanating from social media may actually take more than a day to be manifested in news media coverage.

We thus specified two sets of three models: Net Trump–Cruz models with three sets of lags, and Net Clinton–Sanders models with three sets of lags. In what follows, we

Table 1. Concurrent (no-lag) time-series regression models with Prais–Winsten estimation predicting net Trump advantage in news coverage in six categories of media.

	Far Right	Right Media	Center Right	Mainstream	Left Media	Left Click
Trump–Cruz	-0.012	-0.013	-0.038**	-0.066	-0.023**	-0.024
Tweets	(0.008)	(0.010)	(0.009)	(0.039)	(0.006)	(0.015)
Trump–Cruz	0.001†	0.002*	0.002*	0.009*	0.001*	-0.001
Retweets	(0.001)	(0.001)	(0.001)	(0.004)	(0.001)	(0.002)
Trump–Cruz	0.174**	0.169†	0.127†	0.448*	0.065	0.223†
Poll Average	(0.055)	(0.092)	(0.077)	(0.209)	(0.054)	(0.125)
Trump–Cruz	0.340*	-0.114	0.316†	0.783	0.263*	-0.277
Stage Pub	(0.162)	(0.196)	(0.190)	(0.882)	(0.124)	(0.298)
Trump–Cruz	0.405*	0.174	0.334†	0.367	-0.012	0.040
Stage Med	(0.161)	(0.197)	(0.190)	(0.865)	(0.124)	(0.299)
Trump–Cruz	0.660**	0.039	0.134	0.006	0.203	0.082
Unplanned	(0.199)	(0.242)	(0.234)	(1.076)	(0.153)	(0.368)
Republican	2.389**	3.800**	2.132**	6.809†	1.661**	0.064
Debate	(0.677)	(0.823)	(0.795)	(3.672)	(0.518)	(1.250)
Constant	1.042	1.408	0.086	3.934	1.519	3.287
	(1.071)	(1.795)	(1.491)	(4.055)	(1.049)	(2.434)
Observations	325	325	325	325	325	325
R ²	0.127	0.084	0.092	0.058	0.084	0.023

Standard errors in parentheses.

† $p < 0.1$. * $p < 0.05$. ** $p < 0.01$.

begin by presenting the full models with no lags; then, for reasons of space, we present a summary model of our variable of greatest interest: retweets of the candidates. (All full models are available in the Supplemental Appendix.)

Table 1 presents a no-lag time-series regression with Prais–Winsten estimation exploring factors associated with Net Trump media attention (i.e., Trump’s media coverage–Cruz’s media coverage) across the six categories of news outlets.

The most consistent pattern across the models is that a higher retweet volume of Trump relative to Cruz is associated with greater relative news coverage of him. The next most consistently performing variable is days with Republican debates, which consistently generated greater news attention to Trump (statistically significant for four types of media outlet, and close in another). The relative poll standing of the candidates also played a role, reflecting that as Trump or Cruz gained in the polls, that candidate’s coverage also grew (statistically significant in two tests, and marginally significant in three more). Interestingly, statistically significant effects for events are less consistent, though Trump did seem to see gains in Far Right, Left Media, and possibly Center Right media on days with public events. Nonetheless, there is little evidence that either candidate systematically gained attention advantage from hosting public and media events or making unscheduled appearances.

Turning to the models for Clinton–Sanders, Table 2 shows a fairly consistent pattern associating candidates’ tweets with news coverage—in Far-Right, Right-Wing, Mainstream,

Table 2. Concurrent (no-lag) time-series regression models with Prais–Winsten estimation predicting net Clinton advantage in news coverage in six categories of media.

	Far Right	Right Wing	Center Right	Mainstream	Left Wing	Far Left
Clinton–Sanders Tweets	0.037** (0.011)	0.033** (0.012)	0.014 (0.008)	0.095** (0.027)	0.013** (0.004)	0.019 (0.016)
Clinton–Sanders RT	-0.001 (0.001)	-0.001 (0.001)	-0.000 (0.001)	-0.000 (0.002)	-0.001 (0.000)	0.001 (0.001)
Clinton–Sanders Poll Average	-0.018 (0.017)	0.000 (0.021)	-0.031† (0.017)	0.064 (0.052)	0.006 (0.008)	0.018 (0.025)
Clinton–Sanders Stage Pub	0.041 (0.110)	0.113 (0.120)	0.099 (0.086)	0.149 (0.273)	0.047 (0.045)	0.273† (0.158)
Clinton–Sanders Stage Med	0.222 (0.203)	0.168 (0.220)	0.250 (0.157)	-0.002 (0.501)	-0.028 (0.083)	0.012 (0.292)
Clinton–Sanders Unplanned	0.525 (2.057)	0.722 (2.218)	0.243 (1.579)	1.172 (5.038)	-0.261 (0.836)	-1.429 (2.956)
Democratic Debate	-1.480* (0.740)	-0.986 (0.792)	-0.122 (0.562)	-0.920 (1.796)	-0.353 (0.298)	-1.407 (1.062)
Constant	3.511** (0.525)	3.717** (0.633)	2.930** (0.489)	8.117** (1.519)	0.666** (0.246)	2.199** (0.770)
Observations	325	325	325	325	325	325
R ²	0.054	0.038	0.035	0.060	0.040	0.038

Standard errors in parentheses.
 † $p < 0.1$. * $p < 0.05$. ** $p < 0.01$.

and Left-Wing news outlets. Clinton and/or Sanders tweeting more appears to occur on days with greater news media coverage, though we can say little about what direction causality runs in this case, or if both are in response to the third factor. Otherwise, there is a paucity of statistically significant effects across nearly all hypothesized attention-generating variables. Especially, note the lack of correlation between the retweet factor and coverage, indicating that neither Clinton nor Sanders received boosts in coverage from moments of high retweeting of messages. And campaign event variables are similarly sparse and inconsistent.

Whereas the concurrent (no-lag) models give an impression of the correspondence between key variables and media attention outcomes, to gain an impression of influence—of one thing causing, or at least systematically preceding another—we turn to models with lags, which allow us to examine temporal order by testing the impact of a given variable on another at a later time. Full models may be found in the Supplemental Appendix; here we focus on the variable with the most consistent findings across the three lag types: net retweets of Trump and Cruz. Table 3 displays coefficients and standard errors for net retweets of Trump and Cruz, and those of Clinton and Sanders, for each of the three lag specifications, for ease of interpretation. The Trump–Cruz models show high correspondence between retweets and news media coverage in the no-lag models (four significant tests, one marginal); for one-day lag models the effects are less robust (three marginal tests); and at two-day lags the models are very robust (five significant

Table 3. Summary table displaying coefficients and standard errors of net retweet variables on coverage in six types of media.

	(1)	(2)	(3)	(4)	(5)	(6)
	Far Right	Right Media	Center Right	Mainstream	Left Media	Left Clickbait
Trump–Cruz RT (no lag)	.001 [†] (.001)	.002* (.001)	.002* (.001)	.009* (.004)	.001* (.001)	–.001 (.002)
Trump–Cruz RT (1-day lag)	.002 [†] (.001)	.001 (.001)	.001 (.001)	.007 [†] (.004)	–.000 (.001)	.003 [†] (.001)
Trump–Cruz RT (2-day lag)	.002 [†] (.001)	.002* (.001)	.004** (.001)	.010** (.004)	.003** (.001)	.004** (.001)
Clinton–Sanders RT (no lag)	–.001 (.001)	–.001 (.001)	–.002 (.001)	–.000 (.002)	–.001 (.000)	.001 (.001)
Clinton–Sanders RT (1-day lag)	.002* (.001)	–.000 (.001)	–.001 [†] (.001)	–.002 (.002)	–.000 (.000)	.003 [†] (.001)
Clinton–Sanders RT (2-day lag)	–.000 (.001)	.001 (.001)	.001 (.001)	.004 [†] (.002)	.000 (.000)	.001 (.001)
Observations	325	325	325	325	325	325

Coefficients and standard errors are extracted from fully specified models, which can be found in the Supplemental Appendix.

[†]p < 0.1. *p < 0.05. **p < 0.01.

tests, one marginal). This is powerful evidence that retweets played a role in spurring news media attention to the candidates—and in this case, we primarily mean to Trump. Notably, when we use a slightly different model specification, a lagged dependent model rather than Prais–Winsten, one-day lagged results for the retweet variable are robust across all media types (see the Supplemental Appendix). Our conclusion is that retweet activity of Trump is driving a rise in news media mentions that endures for at least two days. (Also see the Supplemental Appendix for Trump-only models which make clear that it was attention to him, not to Cruz, that drives the overall findings.)

The Clinton–Sanders models, by contrast, show very weak results (four marginal tests in all). It is also worth noting that the correlation between candidates' own tweets in the no lag models is nowhere replicated in the lag models for Clinton–Sanders.

Given the significance of retweets as an attention-generating mechanism for Trump, it is worth considering how these played out over the course of the primaries. Figure 2 displays this in terms of the retweets per week of each of the four candidates. There, Trump's ability to generate social media buzz is clearly in a different league than Cruz's, throughout the series. But what is more notable is that Sanders' retweets largely kept pace with Trump's. This is quite striking in light of our earlier finding concerning the news media attention Trump gained from social media; if the same effect had been present for Sanders, a quite different pattern of media attention may have resulted on the Democratic side. Thus, in comparison to Sanders, Trump's social media message was *not* amplified more in social media, but in the transition from social to news media. This likely underscores the uniqueness of Trump's often abrasive and sensationalist social

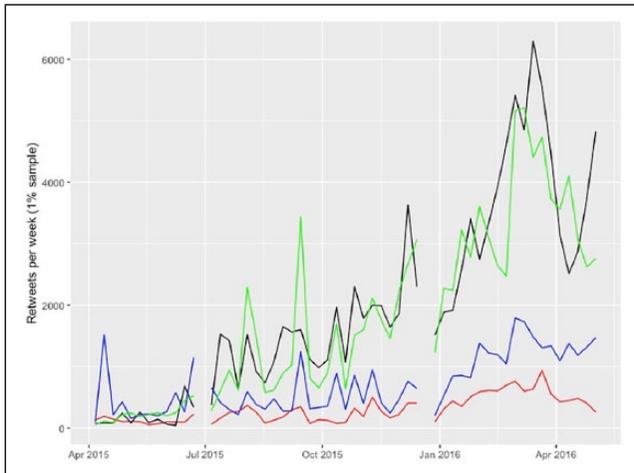


Figure 2. Retweets of each candidate per week (1% sample), April 1, 2015, to May 4, 2016. Black = Trump, Red = Cruz, Blue = Clinton, and Green = Sanders. Blank spots in the series denote data missing from Twitter archive.

media behavior, and the responsiveness of multiple types of news media to those features (Pelled et al., 2018). Sanders was doing something else, which was resonating with social media publics, but not moving from them into the broader media ecology—an intriguing echo of Bennett and colleagues’s (2018) findings about the challenges facing left-leaning movements, and potentially the natural advantage enjoyed by outspoken right-wing populists.

Given the importance of Trump’s retweets relative to each of the other candidates, and the speculation of Wells and colleagues (2016) that he may have responded to waning coverage with increased Twitter activity, we estimate a final set of models using the predicted values of media coverage recovered from the previous models to predict Trump’s relative twitter activity. We estimate a simple bivariate model, although more fully saturated models yield very similar results.² Table 4 shows these results, using OLS (ordinary least squares) regression models to relate subsequent Twitter posting by Trump relative to Cruz to Trump’s news coverage advantage on the previous day. These models suggest Trump tends to tweet more when he has recently garnered *less* relative attention in news coverage from Center Right, Mainstream, Left Wing, and Far Left outlets.

Discussion

Although the 2016 American primaries were limited to “only” two candidates exhibiting populist traits, our results contribute to the growing body of literature on populists’ presence in news media. Furthermore, ours is one of few analyses to compare the treatment of populists by very different sectors of the media system, and to link social media activity to that treatment.

Table 4. OLS regression models relating Trump advantage in news coverage to relative (Trump-Cruz) Twitter activity the next day ($t+1$).

	Trump-Cruz Tweets _{t+1}					
Trump-Cruz Tweets	0.354** (0.051)	0.347** (0.051)	0.206** (0.064)	0.312** (0.055)	0.194** (0.064)	0.444** (0.056)
Far Right	-3.999** (0.941)					
Right Wing		-4.221** (1.073)				
Center Right			-5.097** (1.194)			
Mainstream				-1.404** (0.375)		
Left Wing					-8.889** (2.001)	
Far Left						-0.376 (0.893)
Constant	17.943** (4.028)	19.897** (4.140)	14.532** (3.187)	18.791** (4.216)	26.500** (4.986)	-0.180 (6.426)
Observations	325	325	325	325	325	325
R ²	0.272	0.279	0.281	0.271	0.288	0.208

Standard errors in parentheses. OLS: ordinary least squares.
*p < 0.05. **p < 0.01.

And our results reveal surprising *uniformity* at how outlets spanning the political-media landscape allocated attention to the major candidates (see Figure 3). Clinton and Sanders were somewhat differentially covered—with right-of-center, right-wing, and far-right outlets largely ignoring Sanders; but outlets of all varieties provided disproportionate coverage to Trump over Cruz from the very beginning of the campaign. Thus, whereas scholars such as Waisbord (2018) emphasize the *fragmentation* of the media system as an important condition of 21st-century populist, we demonstrate marked *similarity* in the responses of different types of media to Trump, leading us to place greater weight on the political economy of attention as a critical component of the populist era; we discuss this in greater detail below.

There was also surprising similarity in the factors that drove Trump's attention advantage, with the volume of his retweets playing an important role for virtually all media types. This was not a partisan phenomenon, nor one restricted to "clickbait" media: the core mainstream press and left-leaning serious journalism (Mother Jones, the New Yorker) outlets were as responsive to the social media amplification of Trump's posts as far-right (Breitbart) and highly social media-oriented outlets (HuffingtonPost). This finding emphasizes both the hybrid nature of the media environment and the significance of social media as an engine with the potential to push attention to populists into every corner of the mediasphere.

At least for *some* populists: what also stood out was that this mechanism for attracting attention was available only to Trump. Sanders, Trump's left-wing populist foil, received comparable social media support, but a fraction of the media attention. One suspects that the content of Trump's tweets, often saturated with attacks on his opponents, establishment elites, and populist targets like immigrants and Muslims, contributed to the volume of his posts getting retweeted, and provided irresistible fodder for news outlets and their readers in ways that Sanders' more policy- and campaign-oriented tweets did not. The little-heralded popularity of Sanders' social media presence certainly merits greater study as an artifact of an American campaign inflected by left-wing populism.

Trump's dominance over Cruz among left-wing outlets further suggests Trump may have gained from vociferously critical coverage from ideological enemies (Esser et al., 2016), a finding that calls for greater attention to the capacities of right- and left-wing populists to provoke spectacles the news media want to cover, and the importance of out-party attacks in highly reactive political moments. At least within American political system, the outrage Trump drew on in his frequent norm violations may be much less available to candidates on the left (Kimmel, 2017). Another possibility is that amplification engines on the right were simply more effective at driving Trump's presence into the news media (Phillips, 2018). Further attention to dynamics within and between news media should attempt to disentangle this possibility.

The political economy of the attention economy

The channel from social media activity to news media attention leads us to ask about the growing role of metrics and audience measurement in the attention economy (Boydston and Aelst, 2018; Webster, 2014). Especially as Trump's Twitter behavior became a central feature of his persona, it appears that news media became attuned to buzz about him

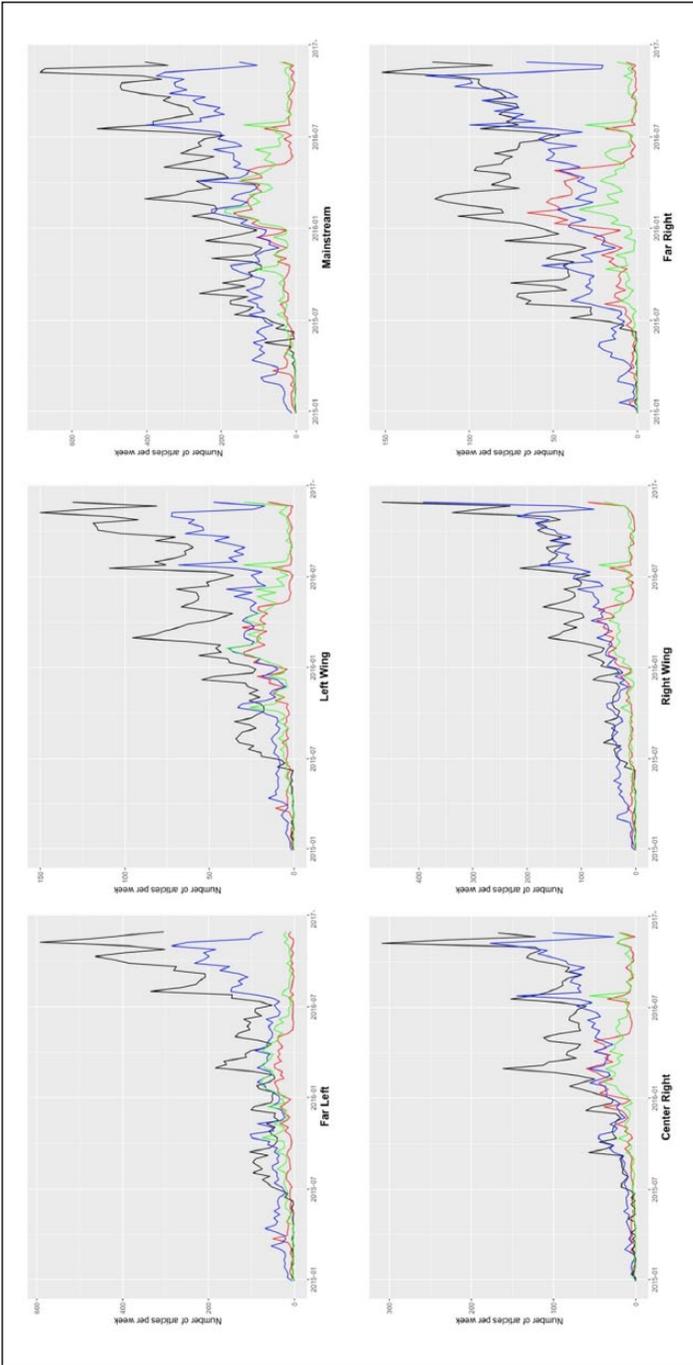


Figure 3. Articles devoted to each candidate per week, by sector of the media system. Here, the range of dates is April 1, 2015, to December 1, 2016, to allow for comparison across primary and general election season. Black = Trump, Red = Cruz, Blue = Clinton, and Green = Sanders.

in social media (McGregor and Molyneux, 2018). In this, our findings contribute to a growing body of evidence concerning the workings of news judgment in a political economy defined by attracting audiences' attention (Karpf, 2016; Webster, 2014), and lend support to the contention that profitability incentives among advertiser-dependent media can play a role in heightening attention to populists (Mudde, 2007).

Rapid change in digital media newsrooms

We must also recognize that Trump's unpredictability, resistance to negative coverage, and sense of timing—the latter emphasized by our finding of Trump's responsiveness to waning news media interest—occurred at a moment of profound change in the news media. In many ways, his campaign “caught off guard” (Boydston and Aelst, 2018) newsrooms struggling to adapt to low and deeply polarized assessments of news media legitimacy (Mitchell et al., 2014), the pace of social media-enabled campaigns, and the lack of public censure of norm-shattering politicians.

Most of all, the changes to the digital newsroom and its political context have not come with unlimited additional resources or time. The attention and production of journalists, editors, pundits, and producers are finite, especially within the context of a single news organization (Benoit et al., 2005; Drew and Wilhoit, 1976; McDonald and Lawrence, 2004; Williams et al., 2015), even as journalists in the contemporary media environment are required to produce a range of digital products in nearly real time (Anderson, 2013; Revers, 2014). While others have noted that Twitter changed the “boys on the bus” style reporting that characterized presidential news coverage in the 20th century (Hamby, 2013), there is clearly need for more research into how the news hole in a digital attention economy is allocated.

Clearly, our study is unable to predict to what degree these results will be replicated with future, non-Trump American populists. Nonetheless, this essay represents the study of a significant proportion of American candidates who could properly be called populists on the national stage. As such, we are able to say something about how populism is being received by American news media: so far, its right-wing, outspoken, attention-seeking, and inciting variety is covered heavily and closely followed on social media. Its left-wing version, much less so. Future research, on more cases, will be needed to determine to what extent, and why, this is true.

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Supplemental material

Supplemental material for this article is available online.

Notes

1. Figure A1 in the Supplemental Appendix graphically displays the trend of news media coverage across the campaign. The trends are highly correspondent with the events of the campaign, offering at least face validity to this approach.
2. We estimate these models with OLS using a lagged endogenous variable. We bootstrap the standard errors on our coefficient of interest.

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