

The Interplay between Right-Wing Alternative Media, Mainstream Media, and Republican Political Elites in the United States

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Right-wing anti-establishment sentiment has enabled the mainstreaming of alternative media outlets across Europe and the United States. Earlier research has quantified the public recognition of these media actors through web traffic rankings, direct social media engagement (e.g., reactions, comments, shares), and topic overlap with establishment counterparts. We demonstrate a computationally scalable approach which (1) sharpens the analytical unit from topic (e.g., “immigration”) to specific news event (e.g., “migrant caravan traveling from Honduras”) and (2) enables the temporal ordering of the same news event appearing among media and politicians. Our method uses a combination of URL matching, word embedding similarity metrics, and network-based event detection techniques. We draw two main findings from a dataset of articles from 13 U.S. right-wing media outlets and (re-)tweets by congressional Republicans from 2016 to 2020. First, we identify a clear shift in politicians’ media consumption from left- to right-wing outlets. While established-right outlets made the largest gains (30% to 42% of all (re-)tweets), alternative-right outlets also grew from 2% to 5%. Second, we identify increasing content alignment among established- and alternative-right outlets as the URL-to-dyad ratio is almost halved over the time period. Finally, we present a proof-of-concept for detecting media outlets’ indirect political alignment.

Keywords: alternative media, alignment, politicians, Twitter, news events

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Introduction

The concurrent rise of right-wing online news sites and right-wing populism across Europe and the United States highlights an apparent affinity between digital media, far-right ideologies, and populist politics. While the weekly reach of alternative outlets such as *Nyheter Idag* in Sweden and *Breitbart* in the United States is modest relative to their establishment counterparts (Newman et al., 2020), these news sites have made inroads while promoting ideas and candidates from ideological peripheries into mainstream political discourse (Benkler et al., 2018; Schroeder, 2019). These outlets are often “associated with labels such as ‘new right,’ ‘alt-right,’ ‘right-wing populist,’ ‘far right,’ or even ‘extreme right’” (Heft et al., 2019, p. 23), and they have the potential for increasing mainstream acceptance of exclusionary and isolationist viewpoints (Caiani et al., 2012). Recognizing that media are key connectors between activist groups, mainstream publics, and political elites, these alternative news sites can be understood as channels through which right-wing counterpublics (see Kaiser and Rauchfleisch, 2019) attempt to shift what is considered acceptable for public discussion.

Quantifying the role of right-wing alternative media is difficult (see also Heft et al., 2019; Holt et al., 2019). Web traffic rankings show that 16 right-wing news sites across Sweden, Germany, Austria, and the United States enter the top 1,000 sites of their respective countries, and their average Twitter and Facebook followings range from thousands to hundreds of thousands (Heft et al., 2019, p. 32). While these direct follower bases are relatively small, their reach among social media users is extended as they are more effective at provoking reactions, comments, and shares than their establishment counterparts (Benkler et al., 2018; Larsson, 2019; Sandberg and Ihlebæk, 2019). Studies focusing on the U.S. 2016 electoral period have highlighted a content-based alignment between right-wing alternative and establishment media on the identity-based topics of abortion, immigration, and Islam (Kaiser et al., 2019), as well as alternative outlets’ ability to rival their mainstream competition as news leaders in the right-wing media landscape (Benkler et al., 2018).

It is tempting to jump to conclusions and identify causal influences within the triangle of alternative media, mainstream media, and political elites. Yet, such causal claims are hard to make: If we observe that after a politician has retweeted a story from an alternative site, and then a mainstream publication reports on the story as well – can we claim that this is caused by the retweet? It may be likely, but it’s hard to know for sure.

In this article, we rather take a step back and focus on describing a *necessary* but not a *sufficient* condition for understanding how ideas spread between our three actors of interest (alternative media, mainstream media, and politicians). This condition requires accurate description of (a) content overlap and (b) temporal order within a media system. If we can determine where a piece of content appears first and its subsequent temporal chain of appearances, we can take a meaningful step towards understanding the role of alternative media.

In doing so, we follow Jungherr et al.’s call for more “systematic analyses of information flows” (2019, p. 404) within hybrid media systems. In particular, less prominent actors (say, a fringe website) may introduce some content (an issue, a frame, a particular take) into the discourse, which is then amplified by other actors (say, politicians on social media) and finally becomes part of mainstream discourse (say, mainstream news sites writing about it) (Jungherr et al., 2019; Langer and Gruber, 2020; Heinderyckx and Vos, 2016). While some large scale case studies exist (e.g., Benkler et al., 2018), there is little research that provides a “systems-view aimed at identifying regular patterns” of indirect resonance (Jungherr et al., 2019, p. 408).

Focusing on the case of the United States (which, for the better or worse, is known to have a rich ecosystem of alternative news sites), we aim to combine novel techniques to offer such a systematic description aimed at the identification of regular patterns. We rely on a unique and extensive corpus of both social media and web data, which we analyze with a combination URL matching, word-embedding based document similarity metrics, and network-based event detection techniques.

Theoretical Background and Related Research

Counterpublics

This study is theoretically grounded in Kaiser et al.'s (2019) functionalist understanding of right-wing alternative media as proxies for right-wing counterpublics. In short, we assume that the public sphere is constituted by a “multiplicity of publics” (Fraser, 1990, p. 77), which are constituted by members of society coalescing into groups based on shared social identities (Rauchfleisch and Kovic, 2016), which internally develop discourses in “parallel discursive arenas” (Fraser, 1990, p. 67) around “matters they understand to be of public concern and that potentially require collective action or recognition” (Benkler, 2006, p. 177). Each public aims for external recognition of their political relevance within the wider public sphere through contesting the boundaries set by dominant publics’ norms of acceptable political behavior and public speech (Fraser, 1990). Right-wing alternative media play a crucial role in this respect, as they act as communication channels through which activist groups find allies and propagate their worldviews (Kaiser and Rauchfleisch, 2019).

Such a functionalist interpretation defines a counterpublic in relational terms: a group falls under this definition if it is “(1) structured around a specific issue that is morally or politically polarizing, (2) opposed to the dominant hegemony within this discourse, (3) perceiving itself as excluded from the public discourse, and (4) having its own influential media outlets” (Kaiser and Puschmann, 2017, p. 1664). Far-right groups meet these conditions, as they perceive themselves as anti-establishment defenders of Western civilizations threatened by multicultural immigration (Ihlebaek and Nygaard, 2021), LGBT and feminist movements (Downing, 2001), as well as a “globalist” world order dominated by political and economic elites (Marwick and Lewis, 2017).

This functionalist approach is not uncontested, though. Critical approaches object to the use of the term “counterpublic” to refer to far-right groups and propose the term “anti-public” (Cammaerts, 2009; Davis, 2020) instead, since the aim of

such a group is to narrow “the discursive space for others” (Asen, 2009, p. 263) and thus to restrict access to the public sphere rather than to expand it. While there is undoubtedly a normative difference between marginalized groups which may be discriminated against and need to fight for their rights on the one hand and right-wing extremists on the other hand, we will use the term “counterpublic” despite these objections, in order to be consistent with related work.

Counterpublics and the mainstream

To influence politics, right-wing counterpublics need to gain mainstream visibility. The decentralized nature of the Internet facilitates these connections, and while established media are still prominent gatekeepers within the networked public sphere as legitimators and amplifiers of content frames (Barzilai-Nahon, 2008), their editorial control is exerted “increasingly less [on] the topic once it has been established as attracting attention in the political communication space” (Jungherr et al., 2019, p. 407). Jungherr et al. (2019) argue that news coverage between mainstream and alternative news outlets has also grown more interdependent in commercially-oriented media systems.

Right-wing counterpublics’ digital activism primarily involves “manipulat[ing] legacy media, migrat[ing] to alternative platforms, and work[ing] strategically with partisan media to spread their messages” (Freelon et al., 2020, p. 1197). Far-right actors intentionally make controversial statements to provoke mainstream media attention (Cammaerts, 2009); strengthen their collective identities in dedicated online spaces (Atton, 2006; Kaiser and Puschmann, 2017); directly challenge mainstream perspectives within the online comment sections of establishment media (Kaiser, 2017; Toepfl and Piwoni, 2017); create their own alternative outlets to promote interpretations of news events which counter those of established media (Atkinson et al., 2017; Wasilewski, 2019).

In our study, we focus on the last point: alternative outlets. However, we are not interested in how they *challenge* or *differ* from mainstream outlets, but rather in

how far they overlap. In particular, we want to know in how far content published in alternative outlets also appears in mainstream outlets at a later point in time.

Alternative Media

Alternative media are often described as less hierarchical, less commercial, less professionalized, and more participatory than mainstream media (Atton, 2006; Holt et al., 2019), even though recently, convergence can be observed (Kenix, 2011; Rauch, 2016). Yet, a pivotal difference remains: alternative media have the distinct aim of pursuing social change through the production of content which is critical of existing power structures (Rauch, 2016). While alternative media have often been welcomed as making minority voices heard, conceptually, also far-right media fall under the same umbrella, given that they strategically “use the same counter-hegemonic discourses as other alternative news media” (Holt et al., 2019, p. 862).

Despite being relative newcomers, right-wing alternative media outlets have successfully extended their mainstream reach through a variety of strategies. These methods include exacerbating distrust of established conservative competitors through direct feuds (Bhat and Vasudevan, 2019), attacking conventional journalistic authority (Figenschou and Ihlebæk, 2018), as well as normalizing their website appearances to attain an air of traditional legitimacy (Heft et al., 2019) while simultaneously publishing partisan content which “jettison the conventional journalistic norms of objectivity and impartiality” (Leung and Lee, 2014, p. 341). This provocative content tends to resonate in the networked public sphere, as controversy prompts amplification within social media platforms (Zhang et al., 2017), and encourages responses from mainstream media journalists (Gulyas, 2016; Nygaard, 2021) and opinion leaders (Åkerlund, 2020).

The Case of the United States

According to Heft et al. (2019), the political and media conditions of the United States present “mixed potential for a flourishing alternative right-wing news scene”

(p. 28). On one hand, they suggest that growth is limited since partisan coverage is already well-accepted within establishment conservative media. Fox News is a prime example, as its “distinctive, rightward tilt” (Hallin and Mancini, 2004, p. 217) dates to the 1990s, and it dominates the right-wing media sphere as the most frequented and trusted news source among conservatives (Jurkowitz et al., 2020). On the other hand, they posit that growth in demand for alternative news outlets could also occur due to very low levels of trust in establishment news.

The Republican party’s populist turn intensifies longstanding right-wing distrust of mainstream media (Major, 2014). This is supported by the Pew Research Center’s finding that “Republicans have grown increasingly alienated” since 2014, with 31% of Republican-leaning adults believing that journalists have “very low” ethical standards compared to 5% of Democratic-leaning adults (Gottfried et al., 2019).

Since Republican politicians are incentivized to publicly signal their recognition of voters’ skepticism for mainstream media by sharing more content from alternative outlets, and since politicians react “strategically and instrumentally to the news of the day” (Walgrave and Van Aelst, 2016), the act of sharing alternative news sites’ content provides a meaningful indicator of the extent to which these sites have gained mainstream acceptance. This can be done explicitly, through (re-)tweeting articles directly from alternative news sites, as well as more subtly, by (re-)tweeting mainstream outlets’ articles which contain content first covered by alternative outlets. Through such (re-)tweeting behavior, politicians can signal their identity as “‘true’ conservatives” (Atkinson and Berg, 2012). To cover both scenarios, we ask:

RQ1: To what extent are congressional Republicans citing right-wing alternative media directly in their tweets?

RQ2: To what extent are mainstream media stories, which report on an event or issue initially covered by alternative media in the right-wing media sphere, cited in tweets by congressional Republicans?

Finally, we are interested in the over-time development. Conservative establishment outlets are also under pressure to prove themselves as the “media of the people” relative to outlets further to their right. Despite declaring themselves as truth-tellers compared to “lamestream media”, establishment conservative outlets are themselves often accused by right-wing alternative outlets of being complicit with mainstream elites (Benkler et al., 2018; Bhat and Vasudevan, 2019). Moreover, right-wing counterpublics strategically supported Trump’s candidacy in 2016. This resonated in the right-wing media sphere during the 2016 electoral period, as alternative and established outlets’ agendas aligned on the topics of “immigration, Islam, and abortion” (Kaiser et al., 2019, p. 437). Whether this alignment is an ongoing process partly is an open question, and we ask:

RQ3: Is the role of right-wing alternative media as described in RQ1 and RQ2 changing over time?

Method

Datasets

We collected two datasets for the period of January 1, 2016 through December 31, 2020. The first dataset contains all URLs (re-)tweeted by the official Twitter accounts of all Republicans who served any period of time in the 114th, 115th, and/or 116th Congresses (the @unitedstates project, 2022). The second dataset consists of news articles published by alternative and established right-wing media outlets. The articles were scraped based on a dataset of 924,027 “stories” (i.e., URLs) provided by Media Cloud (Roberts et al., 2021), an open-source platform for studying media on the web. Both datasets were collected using a custom integration of the *INCA* (Trilling et al., 2018) and *urlExpander* (Yin, 2018) Python packages.

Table 1: Count of (re-)tweeted news outlet URLs, grouped by ideological category

Ideological Category	(Re-)tweeted URLs
alternative right	1,173
established right	12,788
left	13,718
mixed	8,340

The Twitter dataset contains 285,447 URLs (re-)tweeted by 377 congressional Republicans.¹ To obtain these URLs, we queried Twitter’s Academic API for politicians’ full timelines and extracted all URLs within them. Due to Twitter’s practice of link shortening, we ran every URL through *urlExpander* in an attempt to obtain the full URL path. If the URL was no longer active, we were unable to obtain the full path. Nevertheless, we were often able to obtain at least the URL domain name since the server would redirect to another page on the website domain. By analyzing the domains of all URLs (i.e., successfully expanded URLs as well as redirected URLs), we were able to associate 36,019 (re-)tweeted URLs with 34 media outlets spanning across the left to right (Appendix: Table A1). The categorizations are based on a Pew Research Center survey, which places 30 national news outlets on a left-right spectrum according to the ideological profiles of their audiences (Jurkowitz et al., 2020, p. 43). The original list is expanded to include outlets selected for this study and the right is divided into alternative right and established right. Table 1 presents the count of (re-)tweeted news outlet URLs grouped by ideological category.

News-related URLs which were not from the 34 national outlets often covered regional news or specialized subcategories such as finance, business, and sports. In our exploratory analysis, regional news appeared most frequently. This is reasonable, as politicians in our dataset are expected to be attuned to the events of the

¹Only official accounts are included (no campaign or personal accounts).

particular congressional districts and states they represent. Press releases did not stand out in the sample, but that may be because our analytical method focused on URL domains. If press releases are posted on the representative's website (e.g., <https://gaetz.house.gov>), the counts would be relatively low since they correspond to each individual (e.g., versus if all press releases were posted to a common domain such as <https://press.house.gov>).

It is important to recognize a limitation with using the Academic API. Because data is collected retrospectively and not through a real-time stream, deleted content may be missing from our dataset. For example, if a politician shared content from Infowars which was then removed, this (re-)tweet would not appear in the dataset if the deletion occurred before our data collection process began in October 2021. This limitation could bias our results as we may miss controversial content (e.g., from alternative right outlets) which effectively pushed discursive boundaries in real-time but which had limited lifespan on the platform itself. Another limitation to consider is the impact of Twitter's content moderation policies. As of 2021, Twitter had suspended the official accounts of American Renaissance, Daily Stormer, Gateway Pundit, and Infowars. It is possible that even if a politician intended to share certain content from one of these websites, it would be prevented from appearing on the platform at the outset.

Our second dataset is the news dataset. To approximate the breadth of the U.S. right-wing media landscape, we selected 13 outlets spanning from the center-right to the extreme-right. While each outlet is conceptually classifiable as "alternative" in opposition to left-wing mainstream media, this study practically categorizes Fox News, Washington Examiner, Daily Caller, Rush Limbaugh, and Sean Hannity as part of the establishment within the right-wing media sphere (Table 2). These outlets are more professionalized and ad-dependent, compared to fringe outlets which advocate neo-Nazi, white nationalist, and/or anti-Semitic positions (Daily Stormer, American Renaissance, VDARE). Breitbart, the Gateway Pundit, and Infowars fall in-between, and are included as they can act as bridges between the periphery and the conservative

mainstream (Table 3).

A two-pronged approach was used to capture article texts for these selected outlets. The first method requested each URL through an open-source news crawler called *news-please* (Hamborg et al., 2017). If successful, *news-please* handled HTML parsing and returned the article text. If *news-please* was unsuccessful, the fallback method was to retrieve the oldest version available in the Internet Archive’s Wayback Machine using the *waybackpy* package (Mahanty, 2021).

Table 2: Count of URLs scraped from established right-wing outlets

Outlet	Scraped URLs
Daily Caller	121,822
Fox News	264,620
Rush Limbaugh	9,396
Sean Hannity	5,647
Washington Examiner	71,710

Table 3: Count of URLs scraped from alternative right-wing outlets

Outlet	Scraped URLs
American Renaissance	9,838
Breitbart	149,241
Daily Stormer	15,823
Gateway Pundit	39,401
Infowars	28,453
Newsmax	71,146
One America News	117,287
VDARE	19,643

Dyadic Comparisons

Harder et al.’s (2017) dyadic comparison method inspired our approach for measuring intermedia alignment in RQ2. They manually coded news articles and grouped them together when they reported about the “same time- and place- specific event” (Harder et al., 2017, p. 282). Within each news event, they created dyads based on the “points in time at which each specific news story appeared first on each media platform” (Harder et al., 2017, p. 284). We computationally scaled this method by identifying news event using Trilling and van Hoof’s (2020) unsupervised clustering approach and generating each cluster’s dyads by comparing the publication timestamps provided by Media Cloud (Figure 1).

After news event clusters were determined (Figure 2), standalone articles and clusters with coverage from only one outlet were filtered out so that the dyadic analysis focused only on news events covered by two or more outlets. Finally, we only kept the first instance of intermedia alignment between two particular outlets within each news event cluster to make our measurement more conservative (Figure 3). This decision helped account for the fact that certain outlets (e.g., Fox News) published a lot more often than other outlets.

Automated News Event Detection

We largely followed Trilling and van Hoof’s (2020) approach for news event detection. First, we pre-processed the articles by removing HTML tags, punctuation, stopwords, and extra whitespaces. Next, we calculated soft-cosine similarity scores between them using word embeddings from the Google News word2vec model. We then grouped the articles into news events using the Leiden community detection algorithm (Traag et al., 2019) and a soft-cosine threshold of 0.6. In line with Trilling and van Hoof (2020), we used a three-day moving window so that a cluster was closed if the last detected article was not followed by any related coverage in the subsequent two days. Since the dyadic comparison approach depends on accurate timestamps, we also filtered out articles with timestamps at exactly 00:00:00.000000000 EST. These

instances appeared to occur due to outlets' RSS feeds only providing the day, and not the time, of publication to Media Cloud. We found that for every outlet, except for Washington Examiner, at least 95% of its stories had usable timestamps. In the case of Washington Examiner, timestamps were available for 83% of stories (Appendix: Table A2). In addition, there was a notable drop in total stories for Washington Examiner from 2017 to 2020, from over 20,000 to fewer than 7,000. It is possible the publication quantity truly dropped or there was volatility in the RSS feed availability for this outlet. We advise the reader to take these observations into account when interpreting the results.

It is also important to note that due to computational constraints, soft-cosine scores were calculated per calendar year and not across the entire period. The two implications of this decision are: (1) a news event which bridged across years would be split into two clusters and (2) we would misidentify the 'lead' outlet. For example, if a news event's first article was published in late December 2016 and two follow-up articles were published in early January 2017, our approach would identify the earliest 2017 article as the 'lead' article of a two-article cluster.

After filtering based on the comparison method described above, the resulting dyadic dataset contains 71,220 dyads from 45,128 clusters. The median count of dyads per cluster was 1.0, meaning that after an outlet published an initial article, there was only one follow-up article by a different outlet. The distribution was skewed right, with the largest cluster containing 10 follow-up articles.

We evaluated the threshold based on a sample of 100 clusters consisting of 1,201 articles. Since large clusters are more prone to being overly broad (representing topics instead of news events), the sample contained the 10 largest clusters and 90 randomly selected clusters. 72 clusters were correct at the news event level. An additional 21 were correct when loosening the requirement to the issue level (multiple news events which are directly related to each other). The remaining 7 were incorrect as they were at the topic level and clustered 1+ articles about loosely related or

unrelated news events together.

Stated differently, when we accept that a cluster may either represent an issue or an event (but not both a topic), we can say that in the 10 largest clusters, we did not identify a single misclassification, and hence observe a perfect precision. Of course, we cannot know whether we have missed a potential article without hand-coding the whole sample, so we cannot report a recall value here (see also Trilling and van Hoof, 2020). If instead we focus on a random sample of 90 clusters (which consists of 315 articles in total), and define precision as the number of articles correctly assigned to an issue or event divided by the total number of articles, we observe a precision of 0.89.

URL Matching

Matching between the news URL and Twitter URL datasets enabled detection of outlets' indirect alignment among congressional Republicans. We pre-processed all URLs by canonicalizing, lowercasing, and removing unmeaningful variation (URL scheme, fragments, and common ad campaign parameters). We then searched every news URL for 1+ matches in the Twitter URL dataset. We found 7,059 matches out of 13,961 (re-)tweeted right-wing media URLs (50.6%). 2,162 were part of multi-article news events. URL matching provided a way to measure outlets' indirect alignment, as we were able to detect when a politician (re-)tweeted an established outlet's article about a news event which was first covered by an alternative outlet.

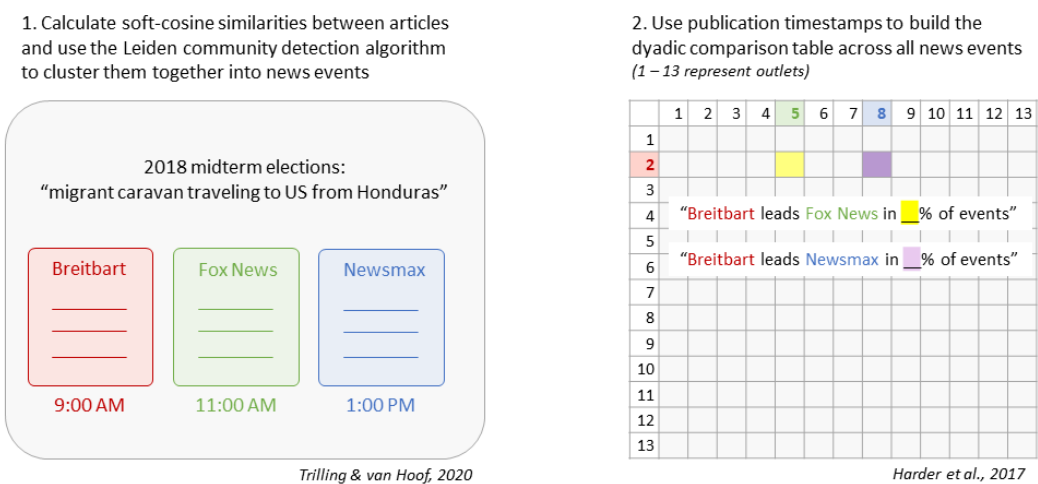


Figure 1. When outlets cover the same news events, who leads and who follows?

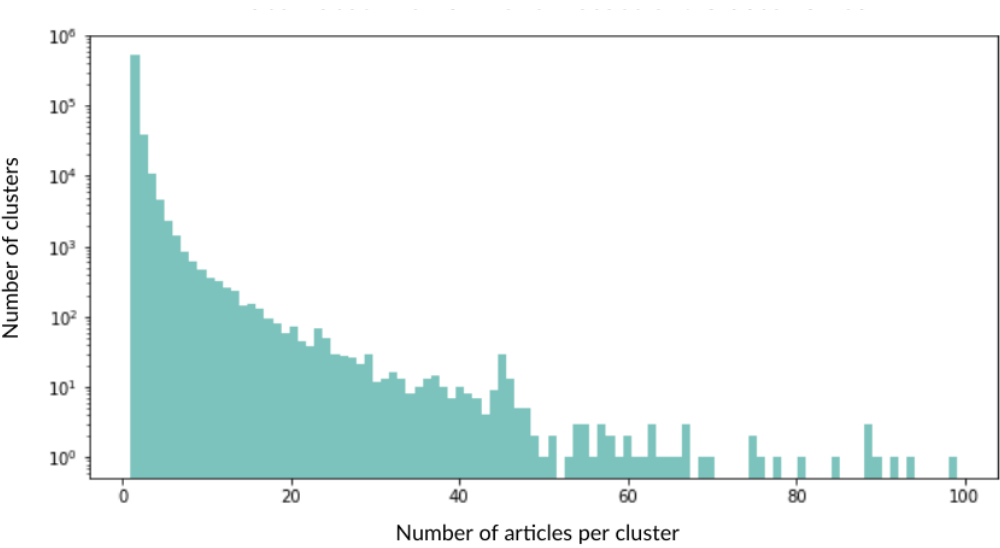


Figure 2. Automated News Event Detection: Cluster Sizes

Note. Based on a soft-cosine threshold of 0.6, the news event detection method identified 518,233 single-article and 62,887 multiple-article clusters. The largest cluster contained 99 articles.

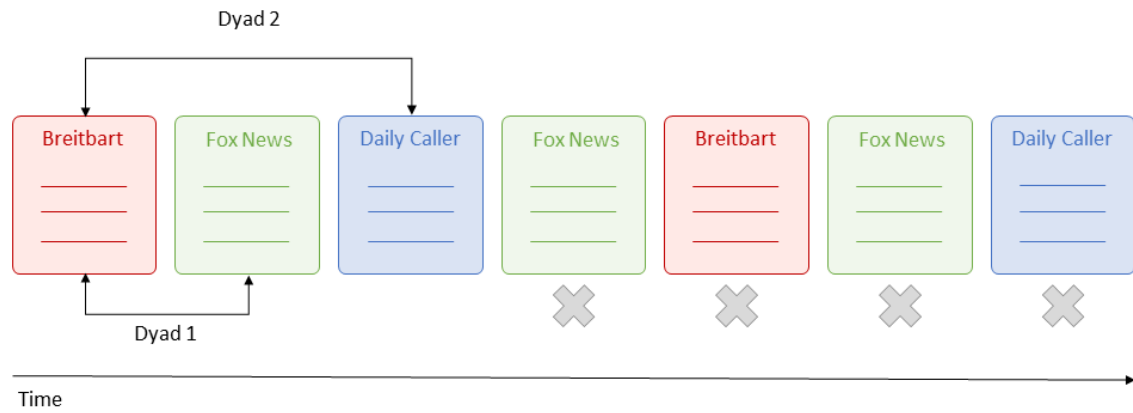


Figure 3. Automated News Event Detection: Relevant Dyads

Note. As an example, consider a cluster where the first article is published by Breitbart. It is followed by three Fox News articles, two Daily Caller articles, and another Breitbart article. This cluster of seven articles results in two dyads. One dyad is between the first Breitbart article and the first Fox News article, and the other dyad is between the first Breitbart article and the first Daily Caller article. The second Breitbart article is filtered out since it is by the initiating outlet. While the remaining Fox News and Daily Caller articles could potentially be used for creating additional dyads, they are excluded to avoid overstating the degree of intermedia alignment (particularly in larger clusters) so that each cluster can result in at most one instance of intermedia alignment between two particular outlets.

Results

Direct Political Alignment

RQ1/RQ3: To quantify the extent of right-wing alternative media’s direct alignment among congressional Republicans, we extracted the domains of (re-)tweeted URLs and checked whether they were associated with our selected outlets. This approach resulted in Figure 5, which shows the percent and count of congressional Republicans’ (re-)tweets by outlets’ ideological category per year (36,019 URLs total). The list of outlets composing each group is available in the Appendix (Table A1). While congressmembers’ direct (re-)tweets of mixed outlets remained steady (23% in 2016 to 24% in 2020), their citation behavior shifted notably from left to right. Figure 4 indicates the shift towards right-wing media is due to a wider pattern across congressional Republicans which is not isolated to a small subset of individuals. In 2016, left-wing outlets were cited 1.4 times more often than right-wing outlets (45% vs. 32%). By 2020, this relationship reversed (47% of citations came from right-wing outlets vs. 29% from left-wing outlets).

While right-wing alternative media’s share remains modest overall, these outlets grew from 2% of all direct (re-)tweets to 5% across the time period. In particular, Breitbart and Newsmax gained traction among congressional Republicans (Figure 6). They were cited 136 and 26 times respectively in 2016 compared to 337 and 77 times in 2020. Among fringe outlets, American Renaissance was directly tweeted once in 2018 regarding a court case between the editor of American Renaissance and Twitter (“Jared Taylor Wins First Round in Anti-Censorship Suit Against Twitter”). A possible explanation of the growth in alt-right shares is that a subset of politicians who already shared such content became increasingly prolific in doing so over time. To examine this possibility, we normalized the direct shares by politicians (Figure 7). As the increase in alt-right (re-)tweets from 2019 to 2020 is accompanied by a corresponding increase in the number of unique politicians (re-)tweeting alt-right outlets, we do not attribute the growth in alt-right shares solely to the outsized impact of a

few individuals.

Within the right-wing establishment, the trajectories of Washington Examiner and Fox News diverged. In 2016, Washington Examiner was the most popular outlet with 1,095 citations while Fox News came in second with 883 citations. They switched positions by 2020. Washington Examiner's direct citations dropped 34% while Fox News' citations grew 317%. The website of Fox News political commentator, Sean Hannity, also grew in direct (re-)tweets, from single digits to almost 50 in 2020. Daily Caller aligned most frequently during presidential election years (2016 and 2020). Taken together, these findings show that congressmembers' public (re-)tweet behavior reflected Republican voters' increasing distrust of mainstream left-wing and establishment-right outlets.

Indirect Political Alignment

RQ2/RQ3: To measure the extent of right-wing alternative media's indirect alignment among congressional Republicans, we examined instances when they were amplified by other outlets. This pathway was operationalized by tracing politicians' directly (re-)tweeted URLs back through the dyadic method to find the initial right-wing outlet which first covered a specific news event. Figure 8 displays 1,268 total instances of such indirect (re-)tweets over the 5-year period.² Among established right-wing outlets, Fox News and Daily Caller both increased in indirect alignment while Washington Examiner declined. Among alternative right-wing media outlets, Breitbart, The Gateway Pundit, Infowars, Newsmax, and One America News increased their indirect alignment across the period while commonly peaking during the 2020 election year. In contrast, the fringe outlets had minimal direct or indirect alignment from 2016 to 2020.

To explore content differences between direct versus indirect shares, we examined Breitbart and Newsmax using proportion-based word shift graphs (Gallagher

²Note that this is a conservative estimate: We do not claim to comprehensively capture all indirect shares as we prioritized precision over recall during the automated news clustering process.

et al., 2021) as these two outlets grew in both forms of alignment. We did not observe a clear distinction in story content, as indirect shares included keywords associated with both 'normal' stories and more 'right-slanted' stories.³ However, direct shares did disproportionately mention congressional members by name (e.g., Ted Cruz, Susan Collins, Matt Gaetz, Jim Jordan). We suspect politicians used direct shares to self-promote or to bring attention to a news story which covered their colleague's actions/commentary. This pattern was generally not apparent with indirect shares. The only exception was the mention of Mitch McConnell, who was the Senate majority leader during the time period.

To examine indirect alignment from the fringe, we checked the five instances where American Renaissance and Daily Stormer were identified as the "lead" outlet. In each case, our manual review showed that a third unobserved source was responsible for the original coverage. For example, the two instances in 2020 for American Renaissance were (re-)tweets by two congressmembers sharing the same Fox News article, "NYC's sanctuary city policy under fire after freed illegal immigrant allegedly murders 92-year-old". While American Renaissance was identified as the lead outlet, the outlet's article was in reality a re-post of a U.S. Immigration and Customs Enforcement press release. This example indicates a dataset limitation, as we did not capture all relevant media producers when generating news event clusters. Nevertheless, the method itself shows promise for tracing indirect alignment.

Intermedia Alignment

We breakdown the indirect alignment measure to examine the intermedia relationship more closely. Figure 9 shows an overview of the dyads between all right-wing outlets grouped into their respective category (for a more granular view, see Figures A1 to A6 and Tables A3 to A15 in the Appendix). For example, "alt_est" represents

³'Normal' stories were indicated by keywords such as 'obamacare', 'stimulus', 'health', 'pandemic', and foreign affairs-related keywords such as the United Nations, the Middle East/Iran/North Korea, and (de)nuclearization. 'Right-slanted' stories included keywords relating to the 2012 Benghazi attack ('benghazi') and the Robert Mueller report ('robert', 'fbi', 'report', 'claims'). These terms appeared relatively more frequently in indirect than direct shares.

dyads where the lead outlet is associated with the alternative right and where the follower outlet is associated with the established right. From 2016 to 2020, the overall count of dyads trends upwards. A plausible explanation for the increase in “alt_alt”, “alt_est”, and “est_alt” dyads is that alternative-right outlets such as Newsmax and One America News increased their publication volume (Table 4) which meant their overall coverage had a higher chance of aligning with other outlets.

We also examined the URL-to-dyad ratio over time. This value dropped steadily year after year, with 2016’s ratio (20.8) almost halved by 2020 (10.6). This pattern suggests that right-wing media outlets were not only aligning more in absolute terms, but that their content was increasingly aligning with each other.

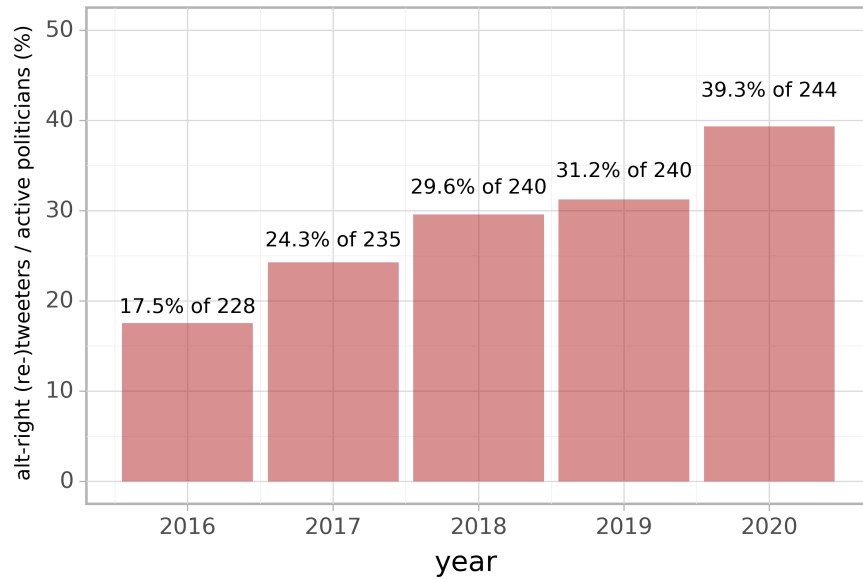


Figure 4. Politicians Mainly (Re-)Tweeting Right-Wing Outlets

Note. From 2016 to 2020, right-wing outlets were the main news sources shared by an increasing number of congressional Republicans. The numerator corresponds with the number of active politicians per year whose news media-related (re-)tweets cited right-wing outlets at least 50% of the time. The denominator, presented in 'of XXX', defines a politician as 'active' if they (re-)tweeted a left/mixed/right-wing outlet at least once in the given year.

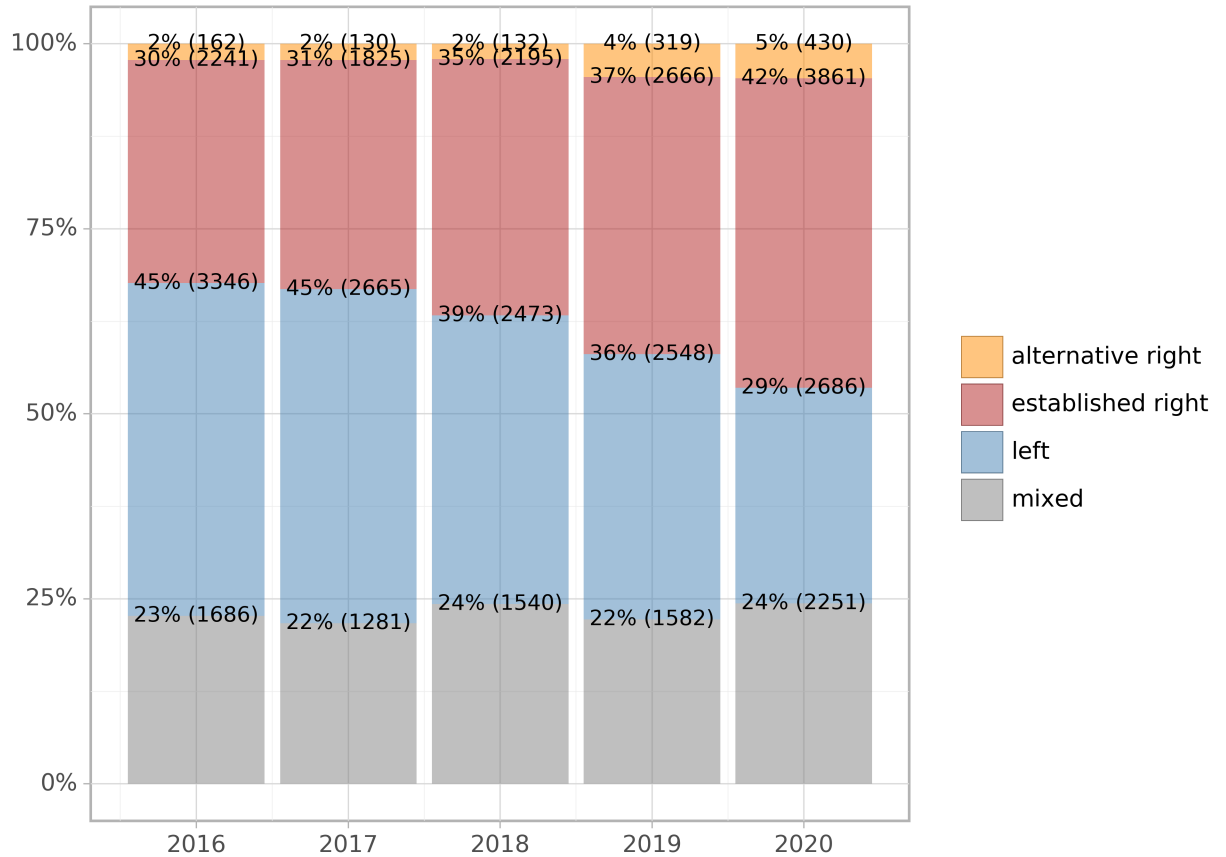


Figure 5. Politicians' (Re-)Tweets by Year: Percent by Ideological Category

Note. Percentages and counts of direct (re-)tweets by ideological category. Direct sharing of right-wing media increased over time, growing from 32% of news media (re-)tweets in 2016 to 47% in 2020.

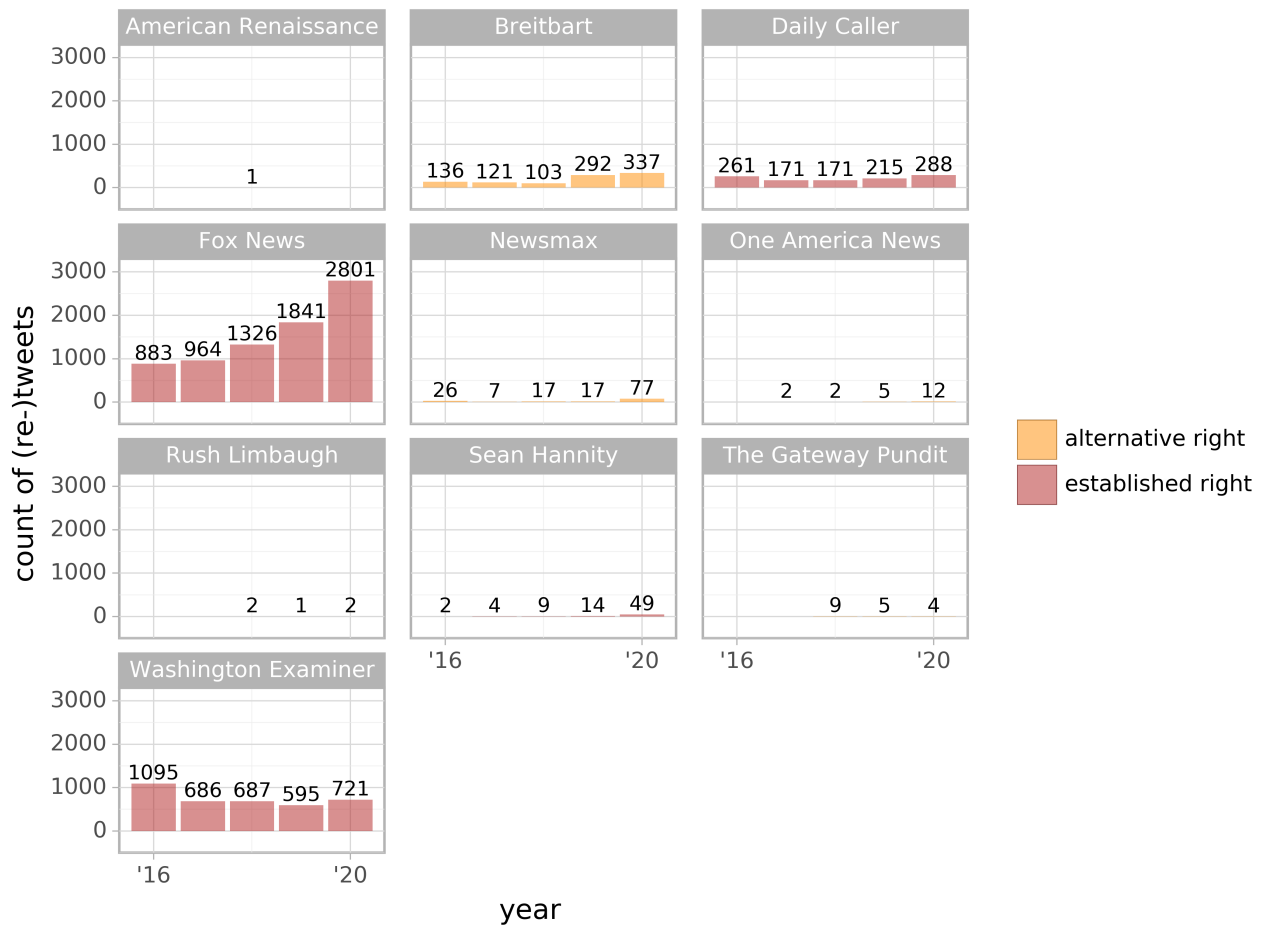


Figure 6. Politicians' (Re-)Tweets by Right-Wing Outlet

Note. Percentages and counts of direct (re-)tweets by politicians by right-wing outlet. Breitbart, Fox News, Newsmax, and Sean Hannity gained traction among congressional Republicans unlike Washington Examiner which experienced a decrease in direct citations.

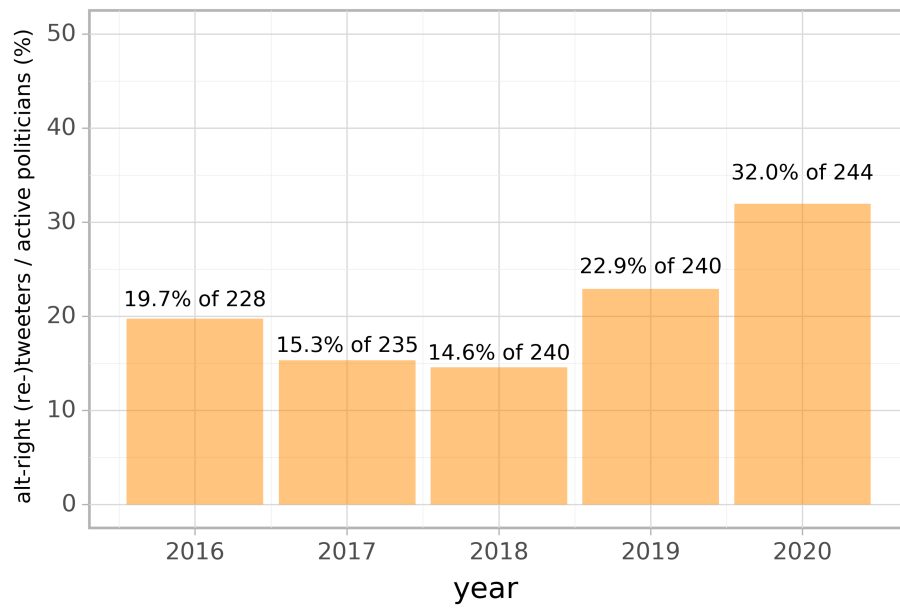


Figure 7. Politicians (Re-)Tweeting Alt-Right Outlets

Note. The number of congressional Republicans who shared at least one alt-right media URL increased 9 percentage points from 2019 to 2020. The denominator, presented in 'of XXX', defines a politician as 'active' if they (re-)tweeted a left/mixed/right-wing outlet at least once in the given year.

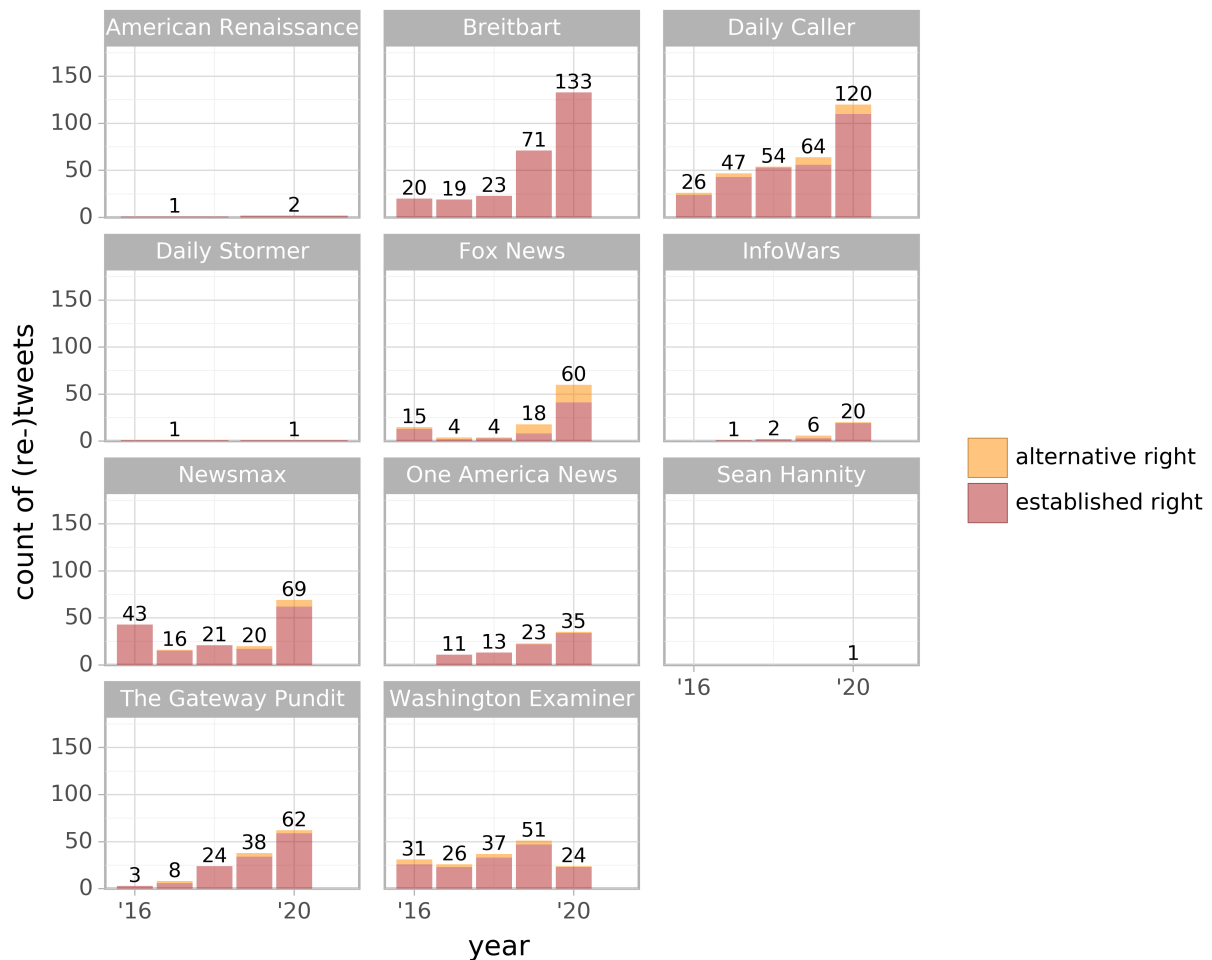


Figure 8. Politicians' Indirect (Re-)Tweets by 'Lead' Outlet

Note. This chart shows 1,268 (re-)tweeted right-wing media URLs which were involved in indirect political alignment. Each instance corresponds with the “follower” position within a news event dyad which was traced through to a “lead” outlet. This figure displays the instances grouped by “lead” outlet and colors the stacked bars by the “follower” outlets' respective ideological category (established right or alternative right).

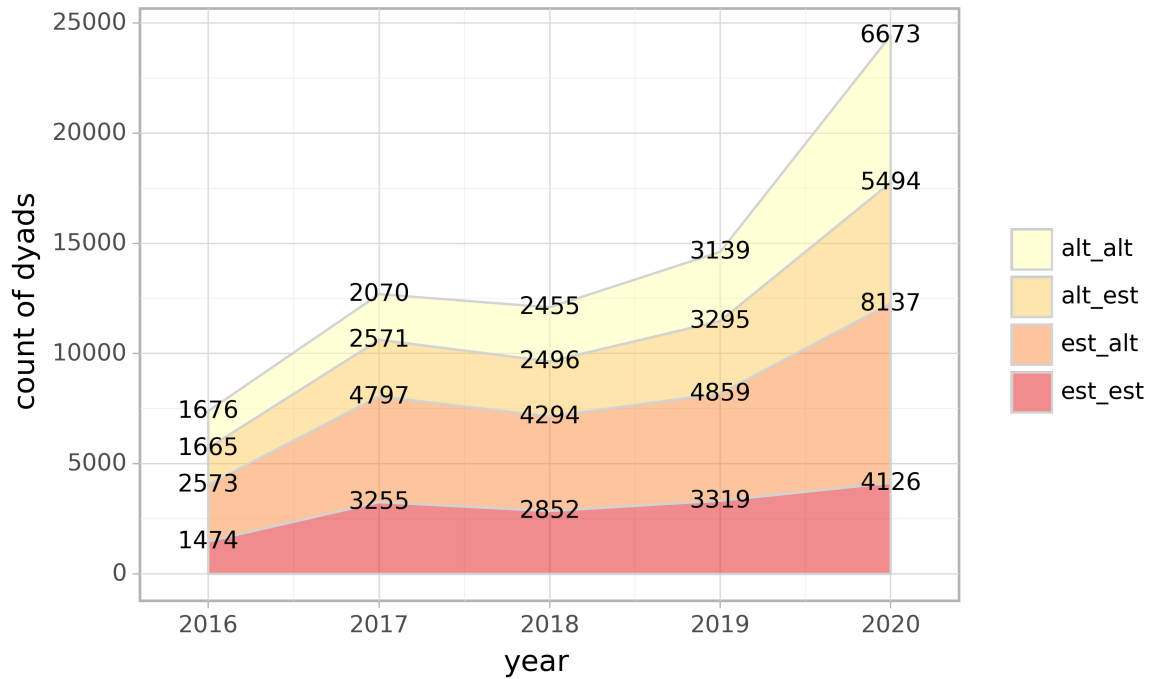


Figure 9. Dyadic comparison (71,220 dyads)

Note. Dyadic comparison over the 2016-2020 period for all right-wing outlets. Each dyad represents an instance where a 'follower' outlet published an article about a news event which was covered by a 'lead' outlet earlier in time. The outlet-to-outlet dyads are aggregated into four groups at the ideological category level. Each group corresponds with a different temporal ordering between established-right and alternative-right categories: 'alt_est', for example, represents instances where an alternative outlet published about a news event before an established outlet.

Table 4: Count of URLs scraped per outlet by publication year

	2016	2017	2018	2019	2020	Total
American Renaissance	1,693	1,795	1,749	1,825	2,776	9,838
Breitbart	30,083	31,771	24,591	25,908	36,888	149,241
Daily Caller	19,359	26,241	25,856	21,268	29,098	121,822
Daily Stormer	4,361	2,953	1,107	3,025	4,377	15,823
Fox News	47,737	48,922	45,156	47,632	75,173	264,620
The Gateway Pundit	4,810	8,095	5,988	7,195	13,313	39,401
Infowars	2,094	2,392	8,071	7,537	8,359	28,453
Newsmax	10,568	11,093	7,706	9,566	32,213	71,146
One America News	7,568	21,018	22,732	23,282	42,687	117,287
Rush Limbaugh	1,471	2,098	2,082	2,017	1,728	9,396
Sean Hannity	322	145	1,172	1,579	2,429	5,647
VDARE	3,249	2,949	8,794	1,773	2,878	19,643
Washington Examiner	20,037	26,126	10,949	7,781	6,817	71,710
Total URLs	153,352	185,598	165,953	160,388	258,736	924,027
Total dyads	7,388	12,693	12,097	14,612	24,430	71,220
Ratio: URLs/dyads	20.8	14.6	13.7	11.0	10.6	13.0

Note. ‘Total dyads’ represents the number of dyads (1) which were identified using the automated news event detection method and (2) which met the criteria for inclusion in the dyadic comparison analysis. ‘Ratio: URLs/dyads’ is a measure for assessing the level of content alignment among right-wing outlets. It shows that increased publication volume was accompanied by an even greater relative increase in content alignment. This suggests growing convergence in news coverage among right-wing media outlets.

Discussion

In this article, we set out to describe the interplay between right-wing alternative media, mainstream media, and political elites in the United States. In particular, we were interested in the extent to which congressional Republicans aligned with right-wing alternative media directly (RQ1) and indirectly (RQ2), and whether these patterns changed over time (RQ3). In order to do so, we implemented a novel computational approach for conducting such analyses at scale.

Grounded in a dataset covering 13 right-wing outlets' news coverage from 2016 to 2020, the study's substantive findings can be summarized as follows: (1) congressional Republicans' media consumption shifted from left-wing towards right-wing media sources and (2) established- and alternative-right outlets showed signs of increasing content alignment. Breaking this down to the outlet-level, the study provides evidence of (1) Breitbart and Newsmax's gains in direct and indirect alignment among these politicians, and (2) The Gateway Pundit, Infowars, and One America News' increase in indirect political alignment.

It is important to note that these findings come with caveats. Due to Twitter's content moderation policies and retrospective data collection through the platform's Academic API, this study cannot guarantee comprehensive capture of politicians' (re-)tweet behavior. For example, the platform may have denied upload of certain content or politicians may have deleted posts before we could retrieve them. If such a denial or deletion was due to controversial content, we would view this as a case in point where right-wing counterpublics are just at the edge of shifting boundaries of acceptable public discussion. While they may not have been successful in the immediate instance, tracking whether similar content is allowed in the future could be of interest for future research on shifting discursive boundaries.

Another notable caveat is that the news dataset contained a 13-outlet subset of the right-wing media sphere. We advise the reader to take this into account when

considering the results on intermedia and indirect political alignment. While the relative temporal ordering of “lead” and “follower” outlets remains correct, we note instances where both outlets were aligning with an unobserved third publisher which preceded them. Consequently, we do not claim that any identified “lead” outlet is the original source; we only state that it published before its dyadic partner.

Recognizing these limitations, the results nevertheless illustrate the value of pursuing more granular analyses of politicians’ media source usage over time and through multi-step flows. While right-wing media source insularity has been examined in political polarization research before (von Nordheim et al., 2021), this study contributes an empirical case of how such insularity can shift over a 5-year period. The approach is useful as right-wing counterpublics often leverage alternative media to gradually shift mainstream discussion and to weaken power structures which right-wing establishment media and politicians are themselves a part of. This longitudinal study provides supporting evidence for right-wing counterpublics’ growing foothold, as we observe congressional Republicans’ increased direct alignment with both alternative media (Breitbart, Newsmax) and partisan established media (Fox News) and a decrease in citations of the more moderate outlet, Washington Examiner.

Note that while the data provide evidence for alternative right-wing media’s agenda-setting role, we make no causal claims of influence here. Rather, we hope our results provides an additional building block for research that tries to understand the structure of right-wing media ecosystems (e.g, Heft et al., 2019). We also believe that our descriptive results can inform agenda setting research in the age of social media (Harder et al., 2017). In particular, our results highlight that multi-step flows (which we dubbed “indirect alignment”) need to be considered more.

Methodologically, this study contributes to the analysis of digital media flows in two ways. First, we demonstrate a scalable approach for narrowing the unit of analysis from broad-level topics to fine-grained news events. To do so, we integrate multiple data retrieval techniques and parsing techniques with a network clustering

approach. We confirm earlier work by Trilling and van Hoof (2020), who found network clustering of soft-cosine similarity networks a suitable approach for the unsupervised detection of news events, but nuance it by finding that tuning the threshold level can be used to decide whether the method should return narrowly defined events or broader issues. Second, we offer a proof-of-concept for detecting indirect news flows. We do this by integrating the aforementioned clustering technique into the dyadic approach outlined by Harder et al. (2017).

The reason for this methodological innovation is not in the first place to save manual labour, but to allow for analyses that are not possible using manual coding. Once we move from broad categories to more fine-grained sub-issues or events (after all, the underlying idea is that some specific piece of information is picked up by some media outlet, not that the general themes it covers change), we run into a *rare events* problem: most texts will *not* be about a given sub-issue or event, so drawing a random sample and coding manually is not an option. This is illustrated by our findings, which required millions of comparisons between documents to find only thousands of matches.

At the same time, computational approaches can never provide the full picture. We suggest that future research should integrate our method with qualitative small-scale approaches (such as participatory observations and interviews with journalists to confirm their sourcing practices) to trace how alternative media gain social legitimacy via establishment media. For example, such a mixed-methods study could plausibly interpret Figure 8's results as the following multi-step process: (1) an alternative outlet initiates a news story, (2) its coverage is picked up by both mainstream outlets *and* other alternative outlets, and (3) this alignment propels the story to politicians who then amplify the content again on social media. A challenge for future research will be to ensure a comprehensive collection of media publishers.

All in all, we showed that to understand how peripheral ideas gain mainstream traction, digital media researchers need tools which enable system-level research on

analytical units more discrete than topics. This study takes a step in this direction by providing a method for tracking the “footprints” of news events as they travel across media and political actors in digital space. Our empirical results suggest that these information journeys are of importance for understanding current media ecosystems.

Acknowledgments

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Appendix

Table A1: Count of direct (re-)tweets by congressional Republicans per media outlet

Outlet	Category	2016	2017	2018	2019	2020	Total
American Renaissance	alt. right	0	0	1	0	0	1
Breitbart	alt. right	136	121	103	292	337	989
Daily Stormer	alt. right	0	0	0	0	0	0
Infowars	alt. right	0	0	0	0	0	0
Newsmax	alt. right	26	7	17	17	77	144
One America News	alt. right	0	2	2	5	12	21
The Gateway Pundit	alt. right	0	0	9	5	4	18
VDARE	alt. right	0	0	0	0	0	0
Daily Caller	est. right	261	171	171	215	288	1106
Fox News	est. right	883	964	1326	1841	2801	7815
Rush Limbaugh	est. right	0	0	2	1	2	5
Sean Hannity	est. right	2	4	9	14	49	78
Washington Examiner	est. right	1095	686	687	595	721	3784
BBC	left	23	25	17	37	39	141
Business Insider	left	22	19	16	2	16	75
BuzzFeed	left	16	12	12	4	2	46
CNN	left	441	246	253	212	239	1391
Huffington Post	left	50	25	13	3	3	94
MSNBC	left	30	17	11	6	9	73
New York Times	left	431	366	498	446	478	2219
Newsweek	left	11	6	18	20	81	136
NPR	left	0	1	0	0	0	1
PBS	left	8	27	11	17	13	76
Politico	left	404	353	279	334	389	1759
The Guardian	left	18	11	6	13	29	77
The Hill	left	1069	798	722	775	851	4215
Time	left	119	78	58	29	21	305
VICE	left	5	0	10	1	3	19
Vox	left	16	4	10	11	6	47
Washington Post	left	683	677	539	638	507	3044
ABC News	mixed	167	105	66	69	93	500
CBS News	mixed	109	133	98	116	109	565
NBC News	mixed	74	74	94	113	138	493
New York Post	mixed	39	31	31	68	301	470
Univision	mixed	0	5	2	4	2	13
USA Today	mixed	316	206	238	238	223	1221
Wall Street Journal	mixed	981	727	1011	974	1385	5078

Note. Ideological category assignment is based on a Pew survey and is expanded to include outlets selected for this study. Right-wing media are divided into alternative right and established right categories.

Table A2: Percent of Media Cloud stories per outlet which did not contain usable timestamps

Outlet	Story Count	Percent of Stories Missing Timestamps
American Renaissance	9,842	0.22
Breitbart	149,991	0.32
Daily Caller	121,923	3.33
Daily Stormer	15,827	0.17
Fox News	279,879	4.25
Gateway Pundit	39,413	0.12
Infowars	28,605	0.71
Newsmax	71,225	2.41
One America News	117,700	0.35
Rush Limbaugh	9,397	0.64
Sean Hannity	29,774	0.17
VDARE	19,872	3.31
Washington Examiner	75,138	16.37

Note. These stories were excluded from dyadic comparison either because no timestamp was available or because the timestamp was at exactly midnight EST. The latter case suggests that only the day, and not the specific time, of publication was available.

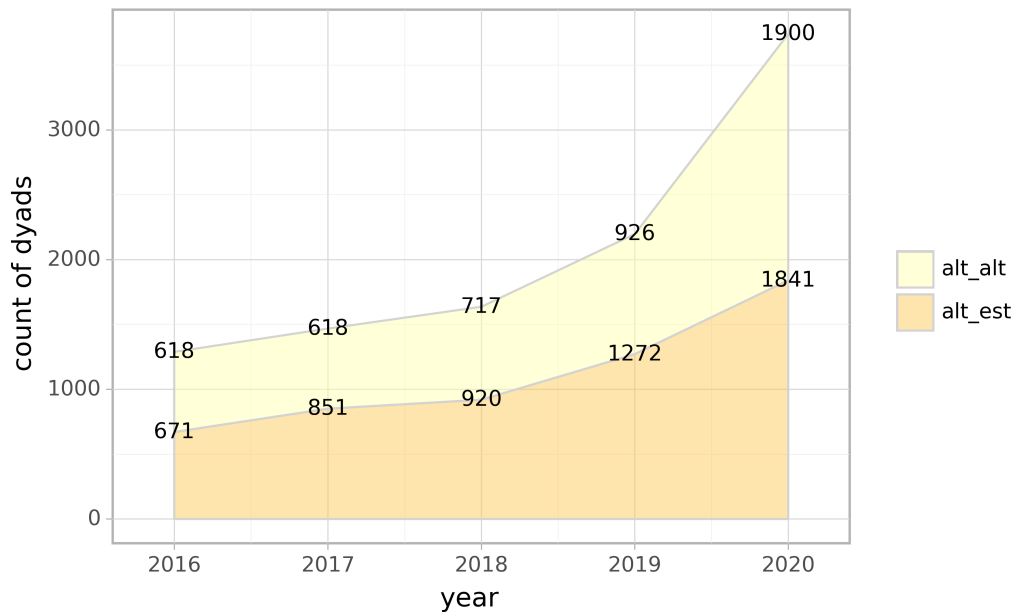


Figure A1. Dyadic comparison (10,334 dyads)

Note. Breitbart grew as a leading outlet among other alternative-right outlets.

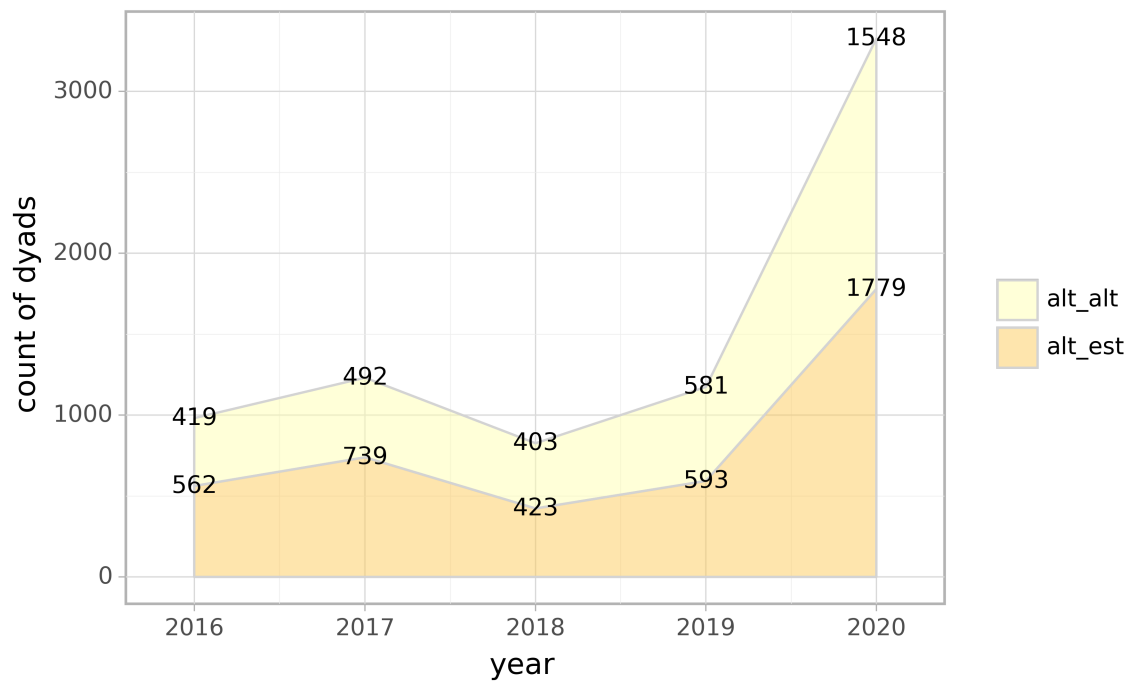


Figure A2. Dyadic comparison (7,539 dyads)

Note. Newsmax grew as a leading outlet among other alternative-right outlets.

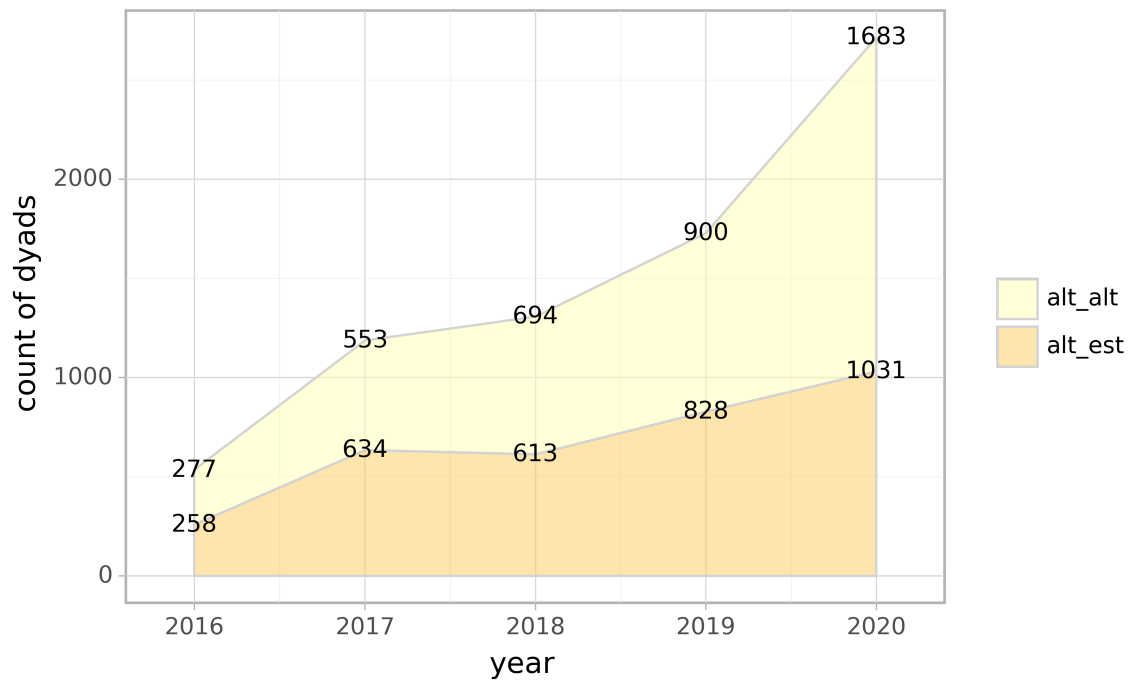


Figure A3. Dyadic comparison (7,471 dyads)

Note. One America News grew as a leading outlet among other alternative-right outlets.

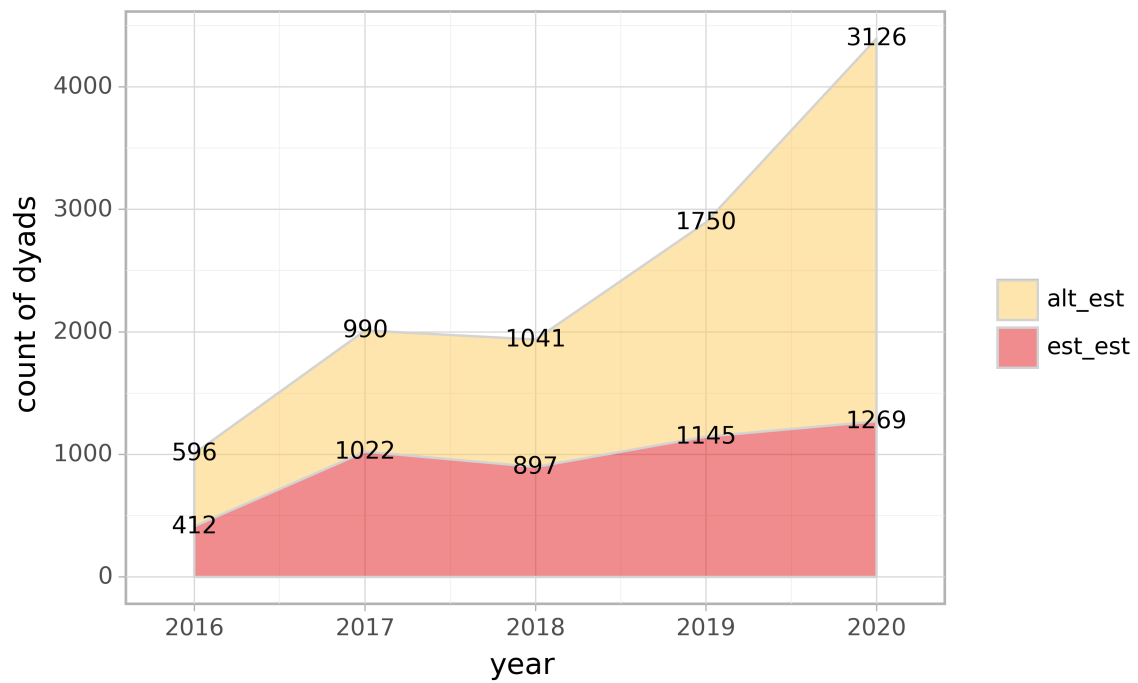


Figure A4. Dyadic comparison (12,248 dyads)

Note. Alternative outlets increased their intermedia leadership with respect to Fox News.

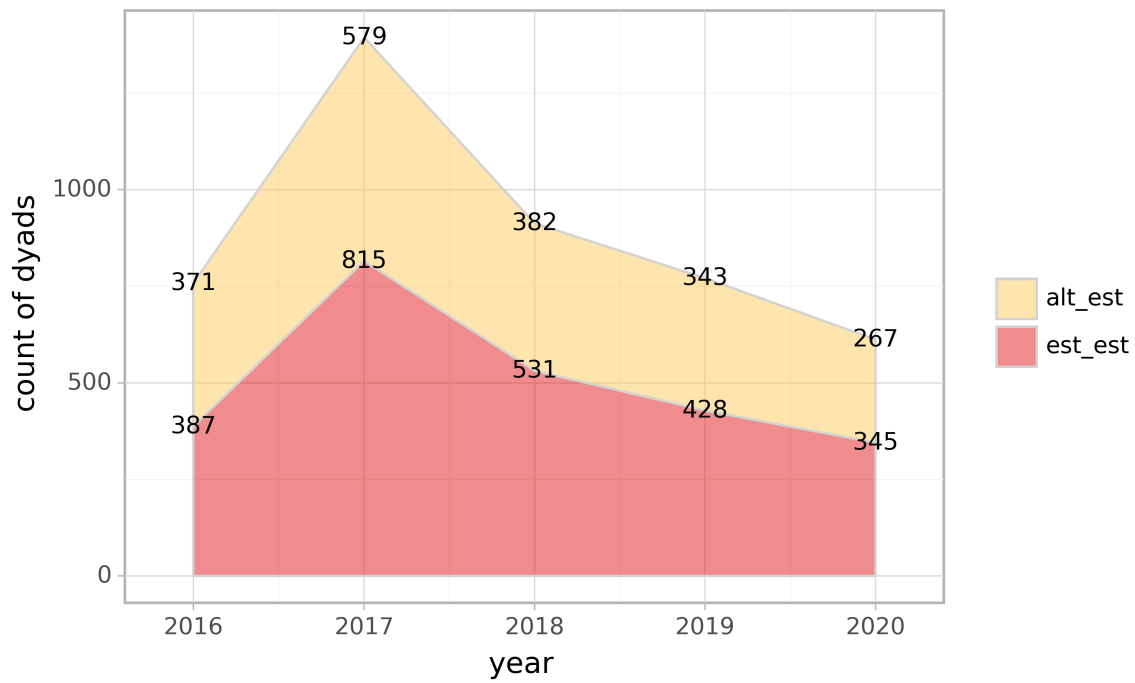


Figure A5. Dyadic comparison (4,448 dyads)

Note. The intermedia relationship between alternative outlets and Washington Examiner remained steady proportionally. The drop in dyad count can be attributed to the Washington Examiner's decreasing publication volume over time.

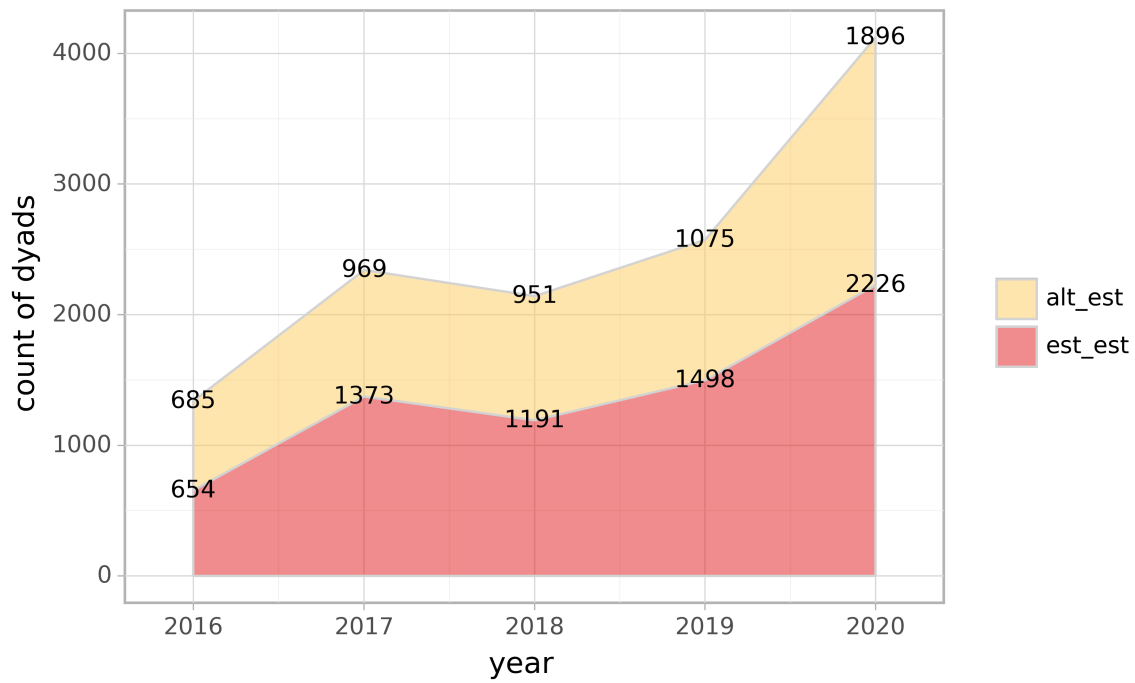


Figure A6. Dyadic comparison (12,518 dyads)

Note. The intermedia relationship between alternative outlets and the Daily Caller remained steady proportionally. The increase in dyad count can be attributed to the Daily Caller's growth in publication volume over time.

Table A3: Dyadic comparison where lead outlet is American Renaissance

Follower outlet	2016	2017	2018	2019	2020
All	58 (14.7%)	70 (17.5%)	58 (17.0%)	45 (13.2%)	113 (16.2%)
Am. Renaissance	-	-	-	-	-
Breitbart	11 (7.9%)	18 (18.6%)	18 (18.9%)	14 (18.7%)	26 (15.6%)
Daily Caller	10 (16.4%)	15 (17.9%)	10 (17.2%)	6 (17.1%)	13 (16.0%)
Daily Stormer	15 (42.9%)	7 (63.6%)	0 (0.0%)	0 (0.0%)	8 (40.0%)
Fox News	7 (9.9%)	10 (13.3%)	9 (14.8%)	9 (10.3%)	17 (11.1%)
Gateway Pundit	3 (27.3%)	4 (25.0%)	2 (14.3%)	2 (9.1%)	3 (7.3%)
Infowars	0 (0.0%)	1 (50.0%)	6 (28.6%)	1 (5.6%)	4 (17.4%)
Newsmax	3 (12.5%)	4 (19.0%)	2 (12.5%)	3 (13.6%)	8 (20.5%)
OAN	1 (25.0%)	2 (10.0%)	1 (5.3%)	4 (17.4%)	3 (9.4%)
Rush Limbaugh	1 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (50.0%)
Sean Hannity	0 (0.0%)	0 (0.0%)	1 (25.0%)	0 (0.0%)	1 (100.0%)
VDARE	5 (19.2%)	5 (13.9%)	7 (23.3%)	5 (13.2%)	28 (21.2%)
Wash. Examiner	2 (11.1%)	4 (10.5%)	2 (9.1%)	1 (5.0%)	1 (16.7%)

Note. This table shows the outlet-level comparison for dyads where American Renaissance is the lead outlet. The dyads are organized by follower outlet and year. Each table cell contains two values. The first value is the count of dyads where American Renaissance is the lead outlet. The second value is a percentage which shows the relative leadership of American Renaissance in the dyadic relationship. It is calculated by dividing the count of 'lead' dyads by the count of all dyads in the relationship where American Renaissance was either the leader or the follower.

To provide an interpretation example, refer to the cell for Breitbart in 2016 which shows “11 (7.9%)”. This cell shows that American Renaissance was the lead outlet 11 times when paired with Breitbart as a follower outlet. These 11 dyads represent 7.9% of all dyads which involve these two outlets. The remaining 129 dyads (92.1%) are shown in the corresponding table where Breitbart is the leader and American Renaissance is the follower.

Table A4: Dyadic comparison where lead outlet is Breitbart

Follower outlet	2016	2017	2018	2019	2020
All	1289 (43.3%)	1469 (34.5%)	1637 (38.0%)	2198 (42.5%)	3741 (45.9%)
Am. Renaissance	129 (92.1%)	79 (81.4%)	77 (81.1%)	61 (81.3%)	141 (84.4%)
Breitbart	-	-	-	-	-
Daily Caller	299 (38.2%)	353 (33.3%)	389 (35.1%)	474 (46.1%)	722 (46.8%)
Daily Stormer	134 (77.9%)	50 (72.5%)	0 (0.0%)	1 (100.0%)	125 (74.9%)
Fox News	214 (35.3%)	314 (30.2%)	338 (30.3%)	583 (36.4%)	945 (33.9%)
Gateway Pundit	105 (57.4%)	179 (54.6%)	115 (41.8%)	208 (52.9%)	320 (52.5%)
Infowars	25 (73.5%)	54 (80.6%)	267 (66.3%)	327 (76.4%)	530 (78.8%)
Newsmax	155 (37.3%)	139 (34.1%)	108 (38.7%)	172 (39.5%)	601 (48.5%)
OAN	39 (26.0%)	95 (27.3%)	121 (29.0%)	124 (26.1%)	136 (23.7%)
Rush Limbaugh	6 (42.9%)	21 (58.3%)	5 (31.2%)	14 (58.3%)	14 (60.9%)
Sean Hannity	1 (100.0%)	1 (100.0%)	42 (79.2%)	51 (72.9%)	82 (75.2%)
VDARE	31 (60.8%)	22 (62.9%)	29 (64.4%)	33 (55.9%)	47 (58.0%)
Wash. Examiner	151 (35.5%)	162 (21.2%)	146 (29.4%)	150 (26.0%)	78 (44.8%)

Note. This table shows the outlet-level comparison for dyads where Breitbart is the lead outlet.

Table A5: Dyadic comparison where lead outlet is Daily Caller

Follower outlet	2016	2017	2018	2019	2020
All	1354 (50.3%)	2552 (52.1%)	2554 (54.4%)	2222 (46.3%)	3319 (44.6%)
Am. Renaissance	51 (83.6%)	69 (82.1%)	48 (82.8%)	29 (82.9%)	68 (84.0%)
Breitbart	484 (61.8%)	707 (66.7%)	720 (64.9%)	555 (53.9%)	821 (53.2%)
Daily Caller	-	-	-	-	-
Daily Stormer	46 (75.4%)	50 (84.7%)	0 (0.0%)	1 (100.0%)	52 (61.2%)
Fox News	232 (40.1%)	506 (43.6%)	557 (41.8%)	664 (38.6%)	1126 (34.9%)
Gateway Pundit	77 (62.1%)	268 (72.0%)	231 (64.3%)	198 (56.1%)	239 (51.7%)
Infowars	17 (70.8%)	74 (88.1%)	316 (84.0%)	287 (80.8%)	220 (75.6%)
Newsmax	191 (48.0%)	290 (53.5%)	171 (54.6%)	146 (46.3%)	467 (45.2%)
OAN	34 (27.2%)	106 (32.8%)	93 (30.8%)	73 (28.0%)	97 (27.1%)
Rush Limbaugh	11 (78.6%)	17 (89.5%)	23 (85.2%)	16 (88.9%)	21 (87.5%)
Sean Hannity	0 (0.0%)	1 (100.0%)	80 (87.9%)	50 (76.9%)	60 (76.9%)
VDARE	20 (69.0%)	19 (67.9%)	25 (65.8%)	9 (37.5%)	29 (82.9%)
Wash. Examiner	191 (38.5%)	445 (38.3%)	290 (42.0%)	194 (31.4%)	119 (53.1%)

Note. This table shows the outlet-level comparison for dyads where Daily Caller is the lead outlet.

Table A6: Dyadic comparison where lead outlet is Daily Stormer

Follower outlet	2016	2017	2018	2019	2020
All	104 (20.0%)	54 (16.3%)	0 (0.0%)	0 (0.0%)	224 (25.5%)
Am. Renaissance	20 (57.1%)	4 (36.4%)	0 (0.0%)	0 (0.0%)	12 (60.0%)
Breitbart	38 (22.1%)	19 (27.5%)	0 (0.0%)	0 (0.0%)	42 (25.1%)
Daily Caller	15 (24.6%)	9 (15.3%)	0 (0.0%)	0 (0.0%)	33 (38.8%)
Daily Stormer	-	-	-	-	-
Fox News	8 (9.4%)	6 (8.0%)	0 (0.0%)	0 (0.0%)	44 (19.3%)
Gateway Pundit	5 (21.7%)	2 (12.5%)	0 (0.0%)	0 (0.0%)	15 (26.8%)
Infowars	1 (33.3%)	2 (100.0%)	0 (0.0%)	0 (0.0%)	27 (29.0%)
Newsmax	8 (21.1%)	5 (19.2%)	0 (0.0%)	0 (0.0%)	30 (25.9%)
OAN	4 (12.9%)	3 (8.6%)	0 (0.0%)	0 (0.0%)	13 (15.1%)
Rush Limbaugh	0 (0.0%)	1 (50.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Sean Hannity	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (60.0%)
VDARE	1 (2.7%)	1 (100.0%)	0 (0.0%)	0 (0.0%)	3 (37.5%)
Wash. Examiner	4 (11.1%)	2 (5.7%)	0 (0.0%)	0 (0.0%)	2 (18.2%)

Note. This table shows the outlet-level comparison for dyads where Daily Stormer is the lead outlet. The lack of dyads in 2018 and 2019 is likely related to Daily Stormer's troubles with securing reliable web infrastructure (Turton and Brustein, 2021). According to the Southern Poverty Law Center, the outlet has used at least 15 domain names between 2017 to 2022 (Southern Poverty Law Center, 2021). Our web scraping method was ineffective at collecting any usable data for dyadic comparison between 2018 and 2019.

Table A7: Dyadic comparison where lead outlet is Fox News

Follower outlet	2016	2017	2018	2019	2020
All	1560 (60.7%)	2738 (57.6%)	2896 (59.9%)	3901 (57.4%)	8282 (65.3%)
Am. Renaissance	64 (90.1%)	65 (86.7%)	52 (85.2%)	78 (89.7%)	136 (88.9%)
Breitbart	392 (64.7%)	725 (69.8%)	777 (69.7%)	1017 (63.6%)	1841 (66.1%)
Daily Caller	346 (59.9%)	654 (56.4%)	775 (58.2%)	1058 (61.4%)	2100 (65.1%)
Daily Stormer	77 (90.6%)	69 (92.0%)	0 (0.0%)	1 (100.0%)	184 (80.7%)
Fox News	-	-	-	-	-
Gateway Pundit	70 (70.7%)	204 (69.9%)	164 (59.6%)	266 (63.6%)	416 (66.0%)
Infowars	11 (84.6%)	49 (87.5%)	233 (79.5%)	230 (76.4%)	363 (77.6%)
Newsmax	330 (60.1%)	368 (58.6%)	287 (59.4%)	516 (59.3%)	2236 (67.6%)
OAN	60 (34.7%)	206 (40.7%)	262 (44.9%)	359 (38.4%)	553 (43.6%)
Rush Limbaugh	4 (80.0%)	12 (80.0%)	20 (69.0%)	25 (73.5%)	16 (80.0%)
Sean Hannity	0 (0.0%)	0 (0.0%)	64 (84.2%)	94 (84.7%)	175 (92.1%)
VDARE	11 (73.3%)	18 (78.3%)	26 (81.2%)	28 (84.8%)	36 (76.6%)
Wash. Examiner	195 (52.3%)	368 (41.8%)	236 (42.5%)	229 (33.5%)	226 (64.6%)

Note. This table shows the outlet-level comparison for dyads where Fox News is the lead outlet.

Table A8: Dyadic comparison where lead outlet is Gateway Pundit

Follower outlet	2016	2017	2018	2019	2020
All	236 (39.3%)	516 (35.1%)	673 (47.7%)	814 (44.6%)	1211 (47.8%)
Am. Renaissance	8 (72.7%)	12 (75.0%)	12 (85.7%)	20 (90.9%)	38 (92.7%)
Breitbart	78 (42.6%)	149 (45.4%)	160 (58.2%)	185 (47.1%)	290 (47.5%)
Daily Caller	47 (37.9%)	104 (28.0%)	128 (35.7%)	155 (43.9%)	223 (48.3%)
Daily Stormer	18 (78.3%)	14 (87.5%)	0 (0.0%)	0 (0.0%)	41 (73.2%)
Fox News	29 (29.3%)	88 (30.1%)	111 (40.4%)	152 (36.4%)	214 (34.0%)
Gateway Pundit	-	-	-	-	-
Infowars	12 (75.0%)	35 (79.5%)	99 (78.6%)	111 (67.7%)	173 (69.5%)
Newsmax	16 (32.7%)	30 (30.9%)	33 (42.9%)	71 (54.2%)	125 (44.8%)
OAN	5 (45.5%)	11 (29.7%)	19 (50.0%)	18 (42.9%)	18 (36.0%)
Rush Limbaugh	1 (20.0%)	5 (71.4%)	12 (85.7%)	10 (66.7%)	7 (46.7%)
Sean Hannity	0 (0.0%)	0 (0.0%)	18 (78.3%)	25 (64.1%)	35 (74.5%)
VDARE	1 (33.3%)	4 (100.0%)	6 (75.0%)	3 (60.0%)	13 (76.5%)
Wash. Examiner	21 (27.6%)	64 (24.9%)	75 (37.1%)	64 (26.2%)	34 (44.7%)

Note. This table shows the outlet-level comparison for dyads where Gateway Pundit is the lead outlet.

Table A9: Dyadic comparison where lead outlet is Infowars

Follower outlet	2016	2017	2018	2019	2020
All	30 (25.2%)	50 (15.7%)	377 (23.3%)	375 (23.4%)	585 (27.1%)
Am. Renaissance	3 (100.0%)	1 (50.0%)	15 (71.4%)	17 (94.4%)	19 (82.6%)
Breitbart	9 (26.5%)	13 (19.4%)	136 (33.7%)	101 (23.6%)	143 (21.2%)
Daily Caller	7 (29.2%)	10 (11.9%)	60 (16.0%)	68 (19.2%)	71 (24.4%)
Daily Stormer	2 (66.7%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	66 (71.0%)
Fox News	2 (15.4%)	7 (12.5%)	60 (20.5%)	71 (23.6%)	105 (22.4%)
Gateway Pundit	4 (25.0%)	9 (20.5%)	27 (21.4%)	53 (32.3%)	76 (30.5%)
Infowars	-	-	-	-	-
Newsmax	1 (11.1%)	3 (20.0%)	23 (25.8%)	27 (30.7%)	60 (31.1%)
OAN	0 (0.0%)	1 (16.7%)	17 (11.6%)	12 (13.0%)	16 (15.8%)
Rush Limbaugh	0 (0.0%)	1 (50.0%)	0 (0.0%)	1 (50.0%)	5 (100.0%)
Sean Hannity	0 (0.0%)	0 (0.0%)	9 (56.2%)	4 (44.4%)	5 (41.7%)
VDARE	0 (0.0%)	0 (0.0%)	7 (63.6%)	8 (66.7%)	8 (36.4%)
Wash. Examiner	2 (12.5%)	5 (12.8%)	23 (16.5%)	13 (9.7%)	11 (34.4%)

Note. This table shows the outlet-level comparison for dyads where Infowars is the lead outlet.

Table A10: Dyadic comparison where lead outlet is Newsmax

Follower outlet	2016	2017	2018	2019	2020
All	981 (48.7%)	1231 (44.3%)	826 (45.4%)	1174 (43.3%)	3327 (41.3%)
Am. Renaissance	21 (87.5%)	17 (81.0%)	14 (87.5%)	19 (86.4%)	31 (79.5%)
Breitbart	261 (62.7%)	269 (65.9%)	171 (61.3%)	263 (60.5%)	637 (51.5%)
Daily Caller	207 (52.0%)	252 (46.5%)	142 (45.4%)	169 (53.7%)	567 (54.8%)
Daily Stormer	30 (78.9%)	21 (80.8%)	0 (0.0%)	0 (0.0%)	86 (74.1%)
Fox News	219 (39.9%)	260 (41.4%)	196 (40.6%)	354 (40.7%)	1074 (32.4%)
Gateway Pundit	33 (67.3%)	67 (69.1%)	44 (57.1%)	60 (45.8%)	154 (55.2%)
Infowars	8 (88.9%)	12 (80.0%)	66 (74.2%)	61 (69.3%)	133 (68.9%)
Newsmax	-	-	-	-	-
OAN	59 (32.1%)	96 (31.1%)	101 (30.8%)	172 (29.1%)	485 (32.4%)
Rush Limbaugh	2 (66.7%)	1 (50.0%)	4 (100.0%)	1 (50.0%)	6 (66.7%)
Sean Hannity	0 (0.0%)	0 (0.0%)	21 (80.8%)	14 (66.7%)	33 (75.0%)
VDARE	7 (53.8%)	10 (83.3%)	7 (58.3%)	6 (35.3%)	22 (23.4%)
Wash. Examiner	134 (40.6%)	226 (31.4%)	60 (31.1%)	55 (24.9%)	99 (50.0%)

Note. This table shows the outlet-level comparison for dyads where Newsmax is the lead outlet.

Table A11: Dyadic comparison where lead outlet is One America News

Follower outlet	2016	2017	2018	2019	2020
All	535 (69.5%)	1187 (65.8%)	1307 (65.1%)	1728 (67.4%)	2714 (66.9%)
Am. Renaissance	3 (75.0%)	18 (90.0%)	18 (94.7%)	19 (82.6%)	29 (90.6%)
Breitbart	111 (74.0%)	253 (72.7%)	296 (71.0%)	351 (73.9%)	439 (76.3%)
Daily Caller	91 (72.8%)	217 (67.2%)	209 (69.2%)	188 (72.0%)	261 (72.9%)
Daily Stormer	27 (87.1%)	32 (91.4%)	0 (0.0%)	0 (0.0%)	73 (84.9%)
Fox News	113 (65.3%)	300 (59.3%)	321 (55.1%)	576 (61.6%)	716 (56.4%)
Gateway Pundit	6 (54.5%)	26 (70.3%)	19 (50.0%)	24 (57.1%)	32 (64.0%)
Infowars	0 (0.0%)	5 (83.3%)	129 (88.4%)	80 (87.0%)	85 (84.2%)
Newsmax	125 (67.9%)	213 (68.9%)	227 (69.2%)	420 (70.9%)	1013 (67.6%)
OAN	-	-	-	-	-
Rush Limbaugh	1 (100.0%)	3 (100.0%)	0 (0.0%)	0 (0.0%)	4 (100.0%)
Sean Hannity	0 (0.0%)	0 (0.0%)	10 (90.9%)	5 (83.3%)	8 (88.9%)
VDARE	5 (55.6%)	6 (85.7%)	5 (83.3%)	6 (85.7%)	12 (92.3%)
Wash. Examiner	53 (64.6%)	114 (54.5%)	73 (46.8%)	59 (44.7%)	42 (65.6%)

Note. This table shows the outlet-level comparison for dyads where One America News is the lead outlet.

Table A12: Dyadic comparison where lead outlet is Rush Limbaugh

Follower outlet	2016	2017	2018	2019	2020
All	20 (37.7%)	28 (27.2%)	30 (28.3%)	31 (27.7%)	31 (29.2%)
Am. Renaissance	0 (0.0%)	1 (100.0%)	1 (100.0%)	0 (0.0%)	1 (50.0%)
Breitbart	8 (57.1%)	15 (41.7%)	11 (68.8%)	10 (41.7%)	9 (39.1%)
Daily Caller	3 (21.4%)	2 (10.5%)	4 (14.8%)	2 (11.1%)	3 (12.5%)
Daily Stormer	0 (0.0%)	1 (50.0%)	0 (0.0%)	0 (0.0%)	2 (100.0%)
Fox News	1 (20.0%)	3 (20.0%)	9 (31.0%)	9 (26.5%)	4 (20.0%)
Gateway Pundit	4 (80.0%)	2 (28.6%)	2 (14.3%)	5 (33.3%)	8 (53.3%)
Infowars	0 (0.0%)	1 (50.0%)	1 (100.0%)	1 (50.0%)	0 (0.0%)
Newsmax	1 (33.3%)	1 (50.0%)	0 (0.0%)	1 (50.0%)	3 (33.3%)
OAN	0 (0.0%)	0 (0.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)
Rush Limbaugh	-	-	-	-	-
Sean Hannity	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
VDARE	2 (66.7%)	0 (0.0%)	0 (0.0%)	1 (50.0%)	1 (100.0%)
Wash. Examiner	1 (14.3%)	2 (12.5%)	1 (8.3%)	2 (13.3%)	0 (0.0%)

Note. This table shows the outlet-level comparison for dyads where Rush Limbaugh is the lead outlet.

Table A13: Dyadic comparison where lead outlet is Sean Hannity

Follower outlet	2016	2017	2018	2019	2020
All	1 (50.0%)	0 (0.0%)	60 (17.7%)	82 (21.8%)	93 (18.3%)
Am. Renaissance	0 (0.0%)	0 (0.0%)	3 (75.0%)	1 (100.0%)	0 (0.0%)
Breitbart	0 (0.0%)	0 (0.0%)	11 (20.8%)	19 (27.1%)	27 (24.8%)
Daily Caller	0 (0.0%)	0 (0.0%)	11 (12.1%)	15 (23.1%)	18 (23.1%)
Daily Stormer	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (40.0%)
Fox News	1 (100.0%)	0 (0.0%)	12 (15.8%)	17 (15.3%)	15 (7.9%)
Gateway Pundit	0 (0.0%)	0 (0.0%)	5 (21.7%)	14 (35.9%)	12 (25.5%)
Infowars	0 (0.0%)	0 (0.0%)	7 (43.8%)	5 (55.6%)	7 (58.3%)
Newsmax	0 (0.0%)	0 (0.0%)	5 (19.2%)	7 (33.3%)	11 (25.0%)
OAN	0 (0.0%)	0 (0.0%)	1 (9.1%)	1 (16.7%)	1 (11.1%)
Rush Limbaugh	0 (0.0%)	0 (0.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)
Sean Hannity	-	-	-	-	-
VDARE	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Wash. Examiner	0 (0.0%)	0 (0.0%)	4 (10.5%)	3 (5.7%)	0 (0.0%)

Note. This table shows the outlet-level comparison for dyads where Sean Hannity is the lead outlet. The lack of dyads in 2016 and 2017 are likely related to (1) the low number of stories for this outlet in Media Cloud (322 in 2016 and 145 in 2017) and (2) the preference for precision over recall in the news event clustering process.

Table A14: Dyadic comparison where lead outlet is VDARE

Follower outlet	2016	2017	2018	2019	2020
All	108 (54.5%)	64 (42.1%)	73 (37.1%)	100 (46.7%)	252 (55.8%)
Am. Renaissance	21 (80.8%)	31 (86.1%)	23 (76.7%)	33 (86.8%)	104 (78.8%)
Breitbart	20 (39.2%)	13 (37.1%)	16 (35.6%)	26 (44.1%)	34 (42.0%)
Daily Caller	9 (31.0%)	9 (32.1%)	13 (34.2%)	15 (62.5%)	6 (17.1%)
Daily Stormer	36 (97.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	5 (62.5%)
Fox News	4 (26.7%)	5 (21.7%)	6 (18.8%)	5 (15.2%)	11 (23.4%)
Gateway Pundit	2 (66.7%)	0 (0.0%)	2 (25.0%)	2 (40.0%)	4 (23.5%)
Infowars	1 (100.0%)	1 (100.0%)	4 (36.4%)	4 (33.3%)	14 (63.6%)
Newsmax	6 (46.2%)	2 (16.7%)	5 (41.7%)	11 (64.7%)	72 (76.6%)
OAN	4 (44.4%)	1 (14.3%)	1 (16.7%)	1 (14.3%)	1 (7.7%)
Rush Limbaugh	1 (33.3%)	0 (0.0%)	0 (0.0%)	1 (50.0%)	0 (0.0%)
Sean Hannity	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (100.0%)	1 (100.0%)
VDARE	-	-	-	-	-
Wash. Examiner	4 (36.4%)	2 (40.0%)	3 (20.0%)	1 (6.2%)	0 (0.0%)

Note. This table shows the outlet-level comparison for dyads where VDARE is the lead outlet.

Table A15: Dyadic comparison where lead outlet is Washington Examiner

Follower outlet	2016	2017	2018	2019	2020
All	1112 (59.5%)	2734 (66.2%)	1606 (63.8%)	1942 (71.6%)	538 (46.8%)
Am. Renaissance	16 (88.9%)	34 (89.5%)	20 (90.9%)	19 (95.0%)	5 (83.3%)
Breitbart	274 (64.5%)	603 (78.8%)	350 (70.6%)	427 (74.0%)	96 (55.2%)
Daily Caller	305 (61.5%)	717 (61.7%)	401 (58.0%)	423 (68.6%)	105 (46.9%)
Daily Stormer	32 (88.9%)	33 (94.3%)	0 (0.0%)	0 (0.0%)	9 (81.8%)
Fox News	178 (47.7%)	513 (58.2%)	319 (57.5%)	455 (66.5%)	124 (35.4%)
Gateway Pundit	55 (72.4%)	193 (75.1%)	127 (62.9%)	180 (73.8%)	42 (55.3%)
Infowars	14 (87.5%)	34 (87.2%)	116 (83.5%)	121 (90.3%)	21 (65.6%)
Newsmax	196 (59.4%)	494 (68.6%)	133 (68.9%)	166 (75.1%)	99 (50.0%)
OAN	29 (35.4%)	95 (45.5%)	83 (53.2%)	73 (55.3%)	22 (34.4%)
Rush Limbaugh	6 (85.7%)	14 (87.5%)	11 (91.7%)	13 (86.7%)	1 (100.0%)
Sean Hannity	0 (0.0%)	1 (100.0%)	34 (89.5%)	50 (94.3%)	13 (100.0%)
VDARE	7 (63.6%)	3 (60.0%)	12 (80.0%)	15 (93.8%)	1 (100.0%)
Wash. Examiner	-	-	-	-	-

Note. This table shows the outlet-level comparison for dyads where Washington Examiner is the lead outlet.