

Political Polarization and Platform Migration:

A Study of Parler and Twitter Usage by United States of America Congress Members

Jacqueline M. Ojala
Graduate Student Clarkson University
otalajm@clarkson.edu

Gillian Kurtic
Undergraduate Student, Clarkson
University
kurticg@clarkson.edu

Isabella Grasso
Undergraduate Student, Clarkson
University
grasso@clarkson.edu

Yu Liu,
Assistant Professor of Electrical and
Computer Engineering Department,
Clarkson University, Ph.D.
yliu@clarkson.edu

Jeanna Matthews
Professor of Computer Science
Department, Clarkson University,
Ph.D.
jnm@clarkson.edu

Golshan Madraki*
Assistant Professor of David. D. Reh
School of Business, Clarkson
University, Ph.D.
gmadraki@clarkson.edu

ABSTRACT

Growing dissatisfaction with platform governance decisions at major social media platforms like Twitter, Facebook, and Instagram has led to a number of substantial efforts, originating both on the political right and the political left, to shift to new platforms. In this paper, we examine one of the most impactful of these platform migration efforts, a recent effort primarily on the political right to shift from Twitter to Parler in response to Twitter's increased efforts to flag misinformation in the lead up to the 2020 election in the US. As a case study, we analyze the usage of Parler by all members of the United States Congress and compare that to their usage of Twitter. Even though usage of Parler, even at its peak, was only a small percentage of Twitter usage, Parler usage has been impactful. Specifically, it was linked to the planning of the January 6, 2021 attack on the United States Capitol building. Going forward, Parler itself may not have a large and lasting impact, but it offers important lessons about the relationship between political polarization, platform migration, and the real-world political impacts of platform governance decisions and the splintering of our media landscape.

KEYWORDS

Political Polarization, Platform Migration, Platform Governance, Social Media

ACM Reference Format:

Jacqueline M. Ojala, Gillian Kurtic, Isabella Grasso, Yu Liu., Jeanna Matthews, and Golshan Madraki. 2021. Political Polarization and Platform Migration: A Study of Parler and Twitter Usage by United States of America Congress Members. In *Companion Proceedings of the Web Conference 2021 (WWW '21 Companion)*, April 19–23, 2021, Ljubljana, Slovenia. ACM, New York, NY, USA, 8 pages. <https://doi.org/10.1145/3442442.3452305>

*Corresponding Author

This paper is published under the Creative Commons Attribution 4.0 International (CC-BY 4.0) license. Authors reserve their rights to disseminate the work on their personal and corporate Web sites with the appropriate attribution.

WWW '21 Companion, April 19–23, 2021, Ljubljana, Slovenia

© 2021 IW3C2 (International World Wide Web Conference Committee), published under Creative Commons CC-BY 4.0 License.

ACM ISBN 978-1-4503-8313-4/21/04.

<https://doi.org/10.1145/3442442.3452305>

1 INTRODUCTION

Growing dissatisfaction with platform governance decisions at major social media platforms like Twitter, Facebook, and Instagram has led to a number of substantial efforts to shift to new platforms.

Facebook and Twitter have both added limitations on content, including flagging posts, disabling posts to be shared, and removing the post. While initially focusing on removing hate speech and terrorist propaganda, Facebook moved toward regulating misinformation about some key topics such as COVID-19 and the 2020 presidential election. These efforts have been far from smooth. Facebook's content moderation policies along with their fact-checking outsourcing has roused concerns of unaccountable censorship [1] and when the platform rolled out a campaign to reduce COVID-19 misinformation, they had to overhaul it due to a lack of specificity [2] [3].

Twitter initially was referred to as "the free speech wing of the free speech party" [4]. However, in recent years, they have moved to restrict some content after observing increasing abuse on their platform [5]. Twitter also introduced a fact checking label in May 2020 [6], mostly on posts about COVID-19. They accomplish this through the addition of a "get the facts" tag linking to more information. Twitter has also focused on fact checking information relating to COVID-19 and U.S. election integrity and looks to expand to more topics in the future.

In response to platform governance decisions, there have increasingly been attempts to organize mass migrations from mainstream social media and more traditional media platforms to new platforms e.g., from Twitter to Parler, Facebook to MeWe, Instagram to Mastodon, Fox News to OAN and WhatsApp to Signal and Telegram [7]. In January 2021, Signal and Telegram downloads surged as users around the world from Iran to India to Brazil were encouraged to migrate away from WhatsApp in response to terms of service changes [8].

In December 2020, a left-leaning movement called for an exodus from Instagram when it changed their community guidelines regarding sexual solicitation to be more restrictive. This change led to protests from sex workers, sexual assault advocates, and sex educators who believed their content would be restricted.

Marginalized communities that experience high levels of abuse on social media are disproportionately impacted by content moderation policies. It has been documented for years that vulnerable and marginalized communities are more likely to be banned, shadow banned, and censored on mainstream social media platforms [9]. This is due to both human bias and discriminatory policing through reporting procedures as well as algorithmic bias in automated systems [10]. For example, anti-racism educators report being “shadow-banned” for saying words and phrases like white supremacy. Activists report being accused by platforms of violent language, but when they report receiving hundreds or thousands of violent, threatening messages their reports go unanswered by the same platforms. These incidents have led to national conversations regarding censorship, fairness, and systems of oppression.

One of the largest migrations to a new platform belongs to political right and conservative American users who have been shifting from Fox News, Twitter, Facebook, and other platforms. In November 2020, this movement specifically called for abandoning Twitter for Parler. In this paper, we focus specifically on this shift.

Parler is a self-proclaimed free speech social media platform. Substantial migration to Parler began in June 2020, shortly after a sharp increase in Twitter’s content moderation activity and in response to a direction by Trump’s campaign manager [11]. Then, just after the November election, there was an even larger wave of conservatives moving from Twitter to Parler. In late November 2020, the Washington Post expressed concern that Trump’s false talking points about voter fraud and a suppressed cure for COVID-19 were being posted on Parler without fact-checking [12]. On January 7 2021, Parler jumped to number one in the Apple’s AppStore after Twitter and Facebook banned Trump [13]. However, after the January 6 attack on the United States Capitol, Amazon, Apple and Google all took steps to shut down Parler by refusing to host their service or disabling downloads of the Parler app [14].

This dramatic sequence of events offers important lessons about the relationship between political polarization, platform migration, and the real-world political impacts of platform governance decisions and the splintering of our media landscape. The migration of a group of users with a unified mindset and political view to a more isolated social media platform can serve to intensify political polarization.

Large mainstream social media platforms already create echo chambers by recommending content to users that is similar to other content they have already consumed [15]. The resulting echo chamber can feed into a user’s confirmation bias, resulting in not only vastly different interpretations of facts, but a completely different set of acknowledged facts [16]. The creation of an even more polarized social media platform such as Parler with the majority of its user base belonging to one political party can exacerbate these political echo chambers. Rather than an echo chamber being present within a portion of a social media platform, the entirety of the platform can become an echo chamber. It should be noted that Parler does not explicitly define itself as a conservative-only platform.

Our study is focused on how Parler was used by US Congress members particularly those who objected to the election's results both during the period before January 6 and the brief period after January 6, before Parler was taken offline. This case study has important lessons for understanding the impact of social media

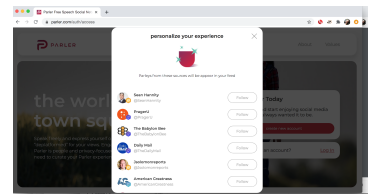


Figure 1: Screenshot of Parler’s recommendations upon creating a new account.

platforms on political polarization and the impact of political polarization on the real-world political processes. In Section 2, we give an overview of the Parler platform and its policies. Then, we compare Parler to Twitter. Section 3 explains the recent events that led to the shutdown of the Parler platform. Section 4 serves as the analysis of Congress members’ usage of Parler and Twitter. We conclude with Section 5, detailing a final analysis and calling for further work.

2 PARLER VS. TWITTER

In this section, we begin with an overview of the Parler platform and its policies. Then, to shape a context for migration from Twitter to Parler, we compare Parler and Twitter platforms with a focus on their content moderation policies.

2.1 Parler Background

Parler focuses heavily on free speech. According to Parler’s community guidelines, the “mission is to create a social platform in the spirit of the First Amendment to the United States Constitution” [17]. There are two principles: do not use the platform for unlawful purposes and do not spam. This is an incredibly short set of guidelines in comparison to Facebook’s or Twitter’s extensive lists [18, 19]. In Section 2.2, we will discuss the important details of Twitter’s guidelines that make it different from Parler.

Parler public profiles are accessible without logging in or having a Parler account (public view). This means all content such as posts and comments are available. However, some metadata associated with each profile, including the date the person joined Parler and counts of followers, following, comments, votes, Parleys, and media, are accessible only when logged in to Parler through a validated account.

One clear sign of political polarization on Parler is that during the account creation process, Parler suggests accounts for new users to follow and these recommendations skew heavily toward conservative public figures. Figure 1 shows the screenshot of Parler’s recommendations during new account creation.

The platform has seven total badges: Verified Influencer, Parler Affiliate, Verified Real Member, Parler Partner, Private Account, Early Parley-er, and Parody Account, as shown in Figure 2

Parler requires a phone number to sign up for an account to associate the account to the user identity. In addition to this, by uploading a front and back picture of a state-issued identification (driver license, passport, state ID) along with a selfie, users can acquire Parler Citizen status as indicated by a red badge (Verified Real Member) next to the user's profile picture. It is important to note



Figure 2: Screenshot of Parler's badge system to determine validity of accounts.

that while this attempts to enforce each profile being associated with one real person, Parler does clearly state that the identity used for verification does not need to match the identity portrayed by the account. In other words, this allows people to make an account under an alias or as a parody, but still be a verified real person, as opposed to a bot. The Verified Influencer badge, a gold badge, requires further authentication and in that case, the account holder's identity must match the profile identity. Besides the verification badges (Verified Real Member and Verified Influencer), Parler adds additional public badges to classify and categorize accounts. These badges are utilized when applicable to determine the validity of a political figure's profile.

Despite this emphasis on badges and validation, we observed that fake or parody accounts were a dominant part of the Parler experience. Since the platform's users skew primarily conservative, fake accounts often target politically-opposing public figures, such as president Joe Biden. In the first 150 results of the search for "Biden" on Parler, many accounts show up that include offensive language within the account handle and profile name.

We also found many signs that Parler is not yet a fully mature platform. When conducting this study, we found that Parler's search function regularly crashed, resulting in an unresponsive site and a perpetual loading message ("Wait before next action"). This was experienced by all members of our research team collecting data at different points in time with different internet connections. The website in general does take time to load; these issues may be a result of a lack of infrastructure or a large strain on the hosting server(s). Parler offers to translate the website into most major languages, but we observed substantial problems in languages other than English. We observed many posts that violated their community guidelines including posts with nudity. The fact that fake and

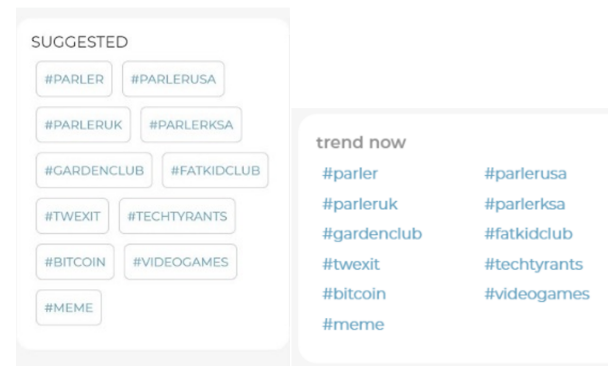


Figure 3: Screenshot of the hashtag section. Left: taken November 13, 2020. Right: Taken January 4, 2021.

parody accounts are such a prominent part of the Parler experience could also be a sign of the immaturity of the platform.

Similarly, as seen in Figure 3, the "SUGGESTED" and "trend now" hashtag sections on the search page did not appear to be dynamic as the hashtags did not change in over one month.

2.2 Comparing the platforms of Parler to Twitter

Twitter and Parler have similar functions, although often with different names. For example, both offer a posting function, but Twitter posts are called Tweets while Parler posts are called Parleys. Similarly, both offer a reshare function. Twitter reshares are called retweets while Parler reshares are called echos. Twitter users react to posts by "liking" them while Parler users react to posts by "voting".

Besides the lack of platform maturity in Parler, one of the biggest differences is in their community guidelines. Twitter has guidelines that enforce safety that prohibit people from threatening violence against an individual or group of people, child exploitation, terrorism/violent extremism, hateful conduct, and other types of sensitive or adult content. Another part of Twitter's guidelines is their privacy section. This section prevents people from sharing other's private information and non-consensual nudity. Twitter's guidelines also include a section about authenticity which intends to prevent people from using Twitter's services to amplify or suppress information that disrupts people's experience on Twitter. It also forbids users from manipulating or interfering with elections and other civic processes. This section also contains guidelines prohibiting impersonation and violation of copyright and trademark laws. A notable part of this section is the synthetic and manipulated media section which prevents users from deceptively sharing synthetic or manipulated media that are likely to cause harm [17].

As stated previously, Parler's guidelines lack depth and nuance in comparison to Twitter's. They primarily focus on prohibiting illegal activity. Interestingly, Parler's user agreement explicitly mentions that Youtube, a video-sharing platform, has more restrictive terms and community guidelines and encourages users to use Parler's video-sharing capabilities to bypass restrictive terms [17].



Figure 4: Screenshot depicting the follower loss of conservative politicians and supporters.

3 THE EVENTS OF JANUARY 6, 2021 AND THEIR AFTERMATH

The dramatic and successful shifts of the users, from Twitter to Parler suddenly stopped (or perhaps paused) on Sunday midnight January 10 due to a chain of unprecedented political events. In this section, we will summarize and analyze this critical chain of political events to provide a better understanding of our case study and sampling strategy in Section 5.

On January 6, a mob of Trump supporters made up of Trump enthusiasts, militant activists, and alt-right white nationalists stormed the Capitol building in an attempt to overturn the defeat of President Donald Trump [20]. Five people were killed, and dozens have been arrested for unlawful entry, assaulting a police officer, unregistered ammunition, unregistered firearm, and other charges [21]. DC mayor, Muriel Bowser, has called the attack domestic terrorism [22]. This event galvanized tech workers, activists, politicians, and citizens to demand more oversight from big tech companies in response to extremism and white supremacy brewing on their platforms.

Parler was accused of serving hate groups and anti-government insurrectionists to organize and strategize, specifically before and during the Capitol attack [22]. Parler was also used to coordinate travel on the ground to avoid police, host discussions about carrying weapons into Congress, and exchanged advice on what tools to use to break in and open doors [22].

In response, major tech players such as Apple, Google, and Amazon demanded that Parler implement a plan to moderate illegal and violent activity on its platform. By Sunday January 10 at 11:59 PM PST Amazon had pulled their web services, leaving Parler shut down indefinitely [23]. Apple and Google banned the Parler app from their app stores as well. One week later, the Parler website was back up online, but only in a very limited form [24]. This was still the case as of January 24 with the website displaying a message objecting to the treatment their site has received. It has been reported that Russia's DDOS Guard is hosting the website and the Parler domain is now registered with Epik, a DNS provider that has offered a safe haven to other controversial websites like 8chan and The Daily Stormer in the past [24].

Parler's CEO and founder, John Matze responded to the bans with accusations that tech companies shut them down as an anti-competitive move, and a threat against free speech [25].

Conservative politicians and supporters also experienced repercussions. Many reported a decrease in followers on Twitter and other platforms, which is depicted in Figure 4

Furthermore, Twitter permanently suspended Trump's personal account @realDonaldTrump. Right after that, he tweeted by two other accounts: a government account POTUS, and his campaign account @Teamtrump. Twitter immediately removed all his tweets and also blocked @teamtrump. Those last removed tweets were about a possibility of Trump having his own platform. Trump does not have a personal Parler account. However, his team (@teamTrump) posted several Parleys to object to Twitter's decision and accuse big tech for banning the freedom of speech.

This incident calls into question the role of tech, and specifically social media platforms, in not only political polarization, but also the rise of alt-right extremism and hate crimes in America and globally [26]. It also calls into question the ability of platforms to effectively moderate global public conversation, i.e., research firm Signal Labs has shown that the misinformation about 2020 election fraud has reduced by 73% after the suspension of Trump's and his allies' accounts on different social media platforms [27].

4 COMPARING THE USAGE OF PARLER AND TWITTER AMONG U.S. POLITICIANS

We wanted to study the impact of the large-scale movement from Twitter to Parler and its impact on political polarization and political processes in the real world. We decided to compare how the 535 members of the 116th United States Congress (100 Senators and 435 Members of the House of Representatives [28]) use Twitter and Parler. We collected data for all members of this target population even if it is to note when a particular member of Congress does not have a Parler or Twitter account.

Our data collection began on December 10th of 2020. In December 2020, at the beginning of our data collection, 523 or 98% of the members of the United States Congress had a Twitter account while only 104 or 19% of the members had a Parler account. 31% of Senators had a Parler account and 17% of Members of the House of Representatives.

We examined the join (and in some cases also the closing) dates for these Twitter and Parler accounts. The earliest join date for Twitter accounts was April 2007 (1 account for Rep. John Boozman) and the earliest join date for Parler accounts was December 2018 (3 accounts for Sen. Rand Paul, Rep. Roy Chip, and Rep. Richard Hudson).

Figure 5 graphs the total number of Twitter and Parler accounts among Members of Congress as a percentage of the 535 members in the 116th Congress. There are regular spikes in the Twitter graph as new members of Congress start their term every two years. In the Parler graph, there are two significant spikes in June and November 2020. In June 2020, conservatives were calling their supporters to migrate to Parler, and the 2020 election was held in November. Candace Owen alone is credited with bringing 40,000 new users to Parler with a single tweet [29].

In the remaining graphs in this section, we focus on the 104106 politicians who had both Twitter and Parler accounts. Only 11 of these are Democrats. In addition to the join date of each account, we collected 5 specific pieces of metadata for each Parler account

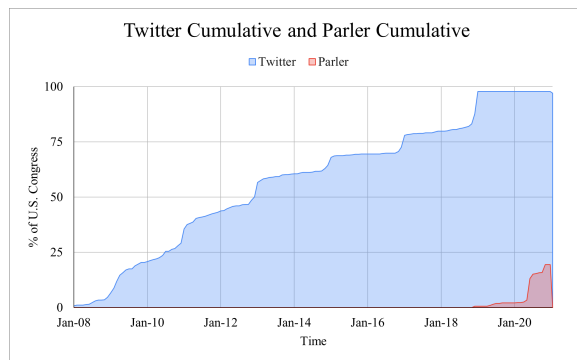


Figure 5: Graph of new Twitter and new Parler accounts created by House Representatives and Senators from April 2007 to January 2021.

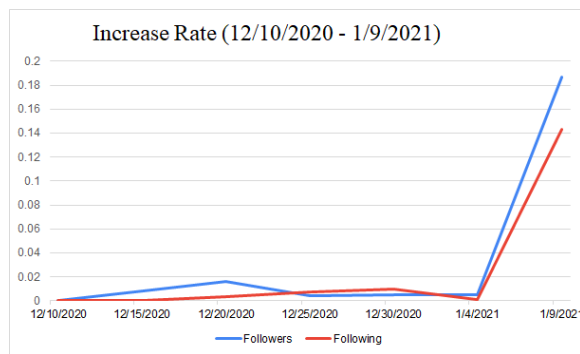


Figure 6: Depicts the increasing rate of following and followers of Parler accounts belonging to 116th Congress members.

including the number of followers, the number of accounts followed by this account, the number of comments, the number of votes, and the number of Parleys. We recorded these totals from the 104106 profiles every 5 days starting on December 10, 2020.

Figure 6 represents the increasing count of followers and following of the Parler accounts belonging to 116th Congress members within the time period between December 10, 2020 and January 9 2021. An obvious surge is observed after January 4 related both to the attack on the US Capitol on January 6 and the banning of Donald Trump's Twitter account on January 8th [30].

We further identified the accounts of 18 politicians who we classified as active users because they had posted at least one Parley and one Tweet between Wednesday December 30th 2020 and Sunday January 3 2021. We then compared in detail the activities of these accounts during two very specific periods. Because the period between the attack on the US Capitol on January 6th and the shutdown of Parler on January 10th was especially eventful, we chose this as one time period of interest. To avoid any normal variation between weekdays and weekends, we then chose to compare this Wednesday to Sunday period with the previous Wednesday to Sunday period. Thus, we refer to the 5 days before the January 6 Capitol riots (Wed 12/30/2020- Sun 1/3/2021) as 'Before January

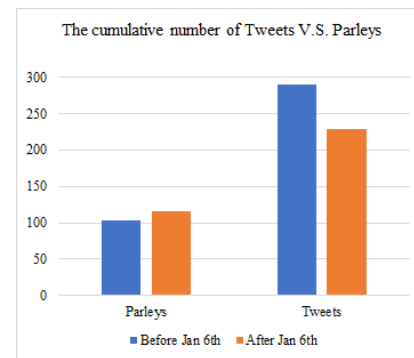


Figure 7: Cumulative number of Tweets vs. Parleys before and after the January 6.

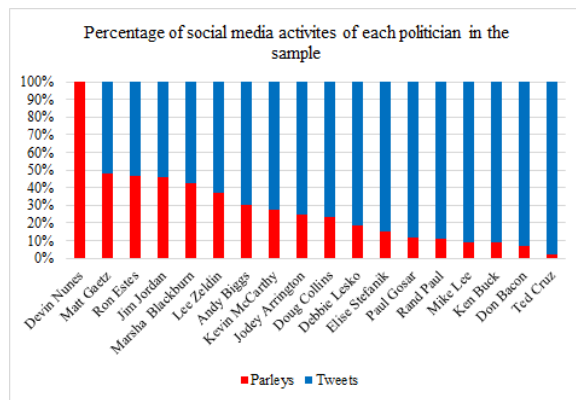
6' and the 5 days beginning with January 6 (Wed 1/6/2021- Sun 1/10/2021) as 'After January 6'.

We begin by noting that of the 18 politicians active on both Parler and Twitter, all are Republicans. This reflects the polarized nature of the Parler platform. It is especially relevant that 15 of these 18 politicians were among those who supported at least one of the objections to the electoral college vote on January 6. Of the 3 who did not object to the electoral college vote, one of them, Martha Blackburn, did publicly express her intention to object, but in the end, did not actually do so. Even at 15/18, those objecting to the electoral college vote are substantially overrepresented among Congress members who are active Parler users: 15/18 or 83%. The overall fraction of lawmakers supporting at least one objection to the electoral college vote was much lower: 147 (8 senators and 139 house members) of 535 or 27% [31]. A non-parametric two-proportion z-test was performed, and it was found that the percentage of lawmakers who objected and are on Parler was significantly higher than the population of lawmakers at large, with a p-value of < 0.001 .

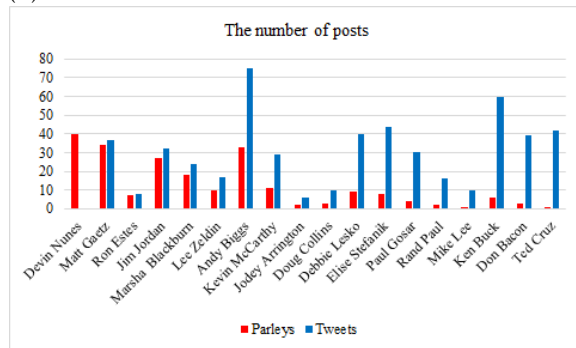
Given the background of these politicians and the increasing enthusiasm among Republican political figures to migrate to Parler from Twitter, we expected to see more Parleys than Tweets from this group. However, this was not the case. As Figure 7 shows, these 18 politicians collectively posted more than twice as often on Twitter as on Parler, with the total of 519 Tweets v.s. 220 Parleys.

Also, we observe that while the total number of posts on Twitter reduced after January 6th, it slightly increased on Parler. Another interesting and unexpected observation was that these 18 politicians shared 50 fewer posts after January 6th than before. We would have expected more posts due to the breaking news of the Capitol riots and Twitter closing Trump's account.

Figure 8 (A) represents the percentage of activities of each politician on each platform within our data collecting period. Devin Nunes (Rep. House) was the only politician in our sample who truly migrated to Parler. He has posted only on Parler and zero tweets, since joining Parler. Matt Gaetz, Ron Estes, and Jim Jordan had roughly the same number of posts on each platform (about half/half). However, the majority of politicians in this sample continued to use Twitter as their main social media platform, posting more on their Twitter page than on Parler.



(A)



(B)

Figure 8: The distribution of activities of our sampled politicians on Parler and Twitter.

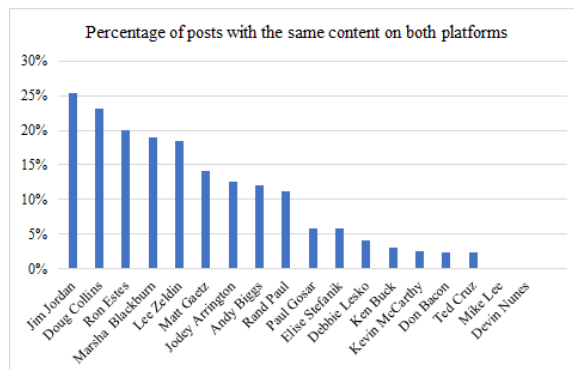


Figure 9: The percentage of posts with the same content on Parler and Twitter.

To have a better understanding of the distribution of activities of our sampled politicians, the actual number of Parleys and Tweets of these members are represented in Figure 8 (B) based on the same order of Figure 8 (A) to make it easiest for comparison. For instance, although Ron Estes has a larger proportion of his posts on Parler than Andy Biggs, still Ron Estes' total number of Parleys is far lower than Andy Biggs' total number of Parleys.

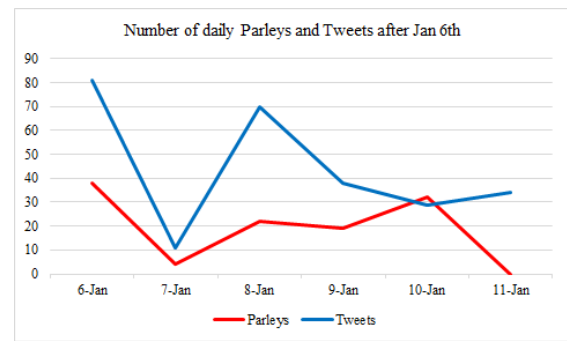


Figure 10: Number of daily Parleys and Tweets highlighting the silence after January 6.

We also compared the content of politician's posts on Parler and Twitter. We wondered if we would see drastically different messaging on Parler. Figure 9 shows that 25% or less of politicians' total posts were the same content posted on both Parler and Twitter (Figure 9). However, the differences between Parler and Twitter usage were rarely different messages on the same topic, but simply more content posted to Twitter. A reason that politicians post more on Twitter is that in addition to posting original content, they were retweeting other content that was available on Twitter and may or may not have been available on Parler.

By comparing Figure 8 (A) and Figure 9, we observe that politicians with the largest number of identical posts on both platforms (Figure 9) also had the highest percentage of Parler usage. Politicians fitting this pattern include Jim Jordan, Ron Estes, Marsha Blackburn, Lee Zeldin, and Matt Gaetz. For example, Jim Jordan has 15 Parleys and Tweets with the same content out of 56 total posts on 2 platforms within the sampling period (27%); also, he was one of the most active Congress members on Parler in our sample. 46% of his posts were Parleys.

When politicians did post the same content on both platforms, we observed that the majority of the time, the content was posted to Twitter first and later to Parler. This is consistent with our observation of Parler being a secondary priority in comparison to Twitter even for this group of politicians active on Parler.

We did observe some interesting differences in content on Parler vs Twitter. For example, the same content was at times accompanied by a different photo. When this happened, we observed that the photo posted on Parler could be classified as intending to stir more emotional response (e.g. a photo of a baby in conjunction with a post about abortion vs. an image of fetus in utero). Beyond this, despite the homogeneous polarized far-right audiences in Parler, we did not see Congress members posting content to Parler that was tailored for these specific audiences.

It is worth noting that we did not observe any members of Congress posting content on Parler that would have been banned on Twitter. In other words, the Parler posts would have violated Twitter's policies and therefore could have been posted on Twitter as well. Other Parler users, including some other politicians, did share posts such as election misinformation or COVID misinformation that might have been flagged if posted on Twitter, but the Congress members in our sample did not.

In Figure 10, we graph the number of daily Parleys and Tweets from our sampled politicians on both Parler and Twitter from January 6 to 11. Our data in Figure 10 revealed a meaningful silence of our sampled politicians on January 7 on both platforms. However, the activity picked back up on January 8, but primarily on Twitter; 12 out of 18 politicians shared at least one post about the Capitol riots on either Twitter or Parler. Only half of these (6 politicians) used the Parler platform to react to the Capitol riots. After January 6th, Parler activity seems to slowly climb until the closure of the platform on January 10 at midnight while Tweets continued on January 11 after the Parler shutdown.

5 CONCLUSION

We focused on one of the most successful of these shifts, from Twitter to Parler. This shift was marked by dramatic events, and eventually ended (or perhaps was paused) due to the combined efforts of large tech giants. Possibly the biggest indicator of the success of this shift was its impact on the real-world political processes. Focusing on the usage of Parler by members of the US Congress was an effective way to observe some of this impact. Political figures choosing to join a social media platform can legitimize the platform and attract thousands of followers whose behavior is even more polarized.

Despite the fast growth of Parler among especially Republican politicians and their followers, our data revealed some of the nuance in this large social media shift. While the calls to action encouraged a complete switch to Parler, most of the politicians simply began to use both platforms. Also, our samples of 18 active politicians on both platforms shows that the activity of the majority was still primarily on Twitter with an average less than 50% of each politician's total number of posts on Parler. Messages posted on Parler were not as polarized as they could have been and mostly repeated a portion of the content posted on Twitter as well. Despite this, the high percentage of active Parler users who also objected to the certification of the electoral college results leaves little doubt as to the political polarization encouraged on this platform.

This research on the activity within social media platforms must continue to be prioritized as shifts and migrations within the social media landscape. This obviously greatly affects not only the virtual political atmosphere but also the physical political atmosphere. The activity on Parler has been directly tied to the violent U.S. Capitol riots [22]. There needs to be more significant efforts in analyzing the impact of platform governance decisions on further splintering of our media landscape and the impact of that on the increased intensity of political polarization. It is also important to archive and study polarized platforms like Parler. The lessons we learn here may be essential to predicting and preventing real world events like the U.S. Capitol riots and even worse in the future.

ACKNOWLEDGMENTS

The authors would like to thank Mark Graham, the director of the Wayback Machine at the Internet Archive for sharing his valuable experience and expertise on social media data collection and his wise advice. We gratefully acknowledge funding from Clarkson University Epidemic and Virus-Related Research Innovation fund.

REFERENCES

- [1] Mike Isaac. 2019. Mark Zuckerberg's Call to Regulate Facebook, Explained. The New York Times. Retrieved December 18, 2020 from <https://www.nytimes.com/2019/03/30/technology/mark-zuckerberg-facebook-regulation-explained.html>
- [2] Golshan Madraki, Isabella Grasso, Jacqueline M. Ota, *et al.* 2020. Characterizing and Comparing COVID-19 Misinformation Across Languages, Countries and Platforms. (December 2020). Retrieved January 15, 2021 from arXiv preprint arXiv:2010.06455.
- [3] Erin Brodwin. 2020. After experts criticized its approach, Facebook overhauls its Covid-19 misinformation policy. Statnews. (December 2020). Retrieved December 18, 2020 from <https://www.statnews.com/2020/12/16/facebook-misinformation-covid19-update/>
- [4] Mathew Ingram. 2011. For Twitter, free speech matters - not real names. Gigaom. (October 2011). Retrieved January 24, 2021 from <https://gigaom.com/2011/10/18/for-twitter-free-speech-is-what-matters-not-real-names/>
- [5] Elizabeth Culliford and Katie Paul. 2020. With fact-checks, Twitter takes on a new kind of task. Reuters. (May 2020). Retrieved December 11, 2020 from <https://www.reuters.com/article/us-twitter-factcheck/with-fact-checks-twitter-takes-on-a-new-kind-of-task-idUSKBN2360U0>
- [6] Yoel Roth and Nick Pickles. 2020. Updating our approach to misleading information. Twitter. (May 2020). Retrieved December 18, 2020 from https://blog.twitter.com/en_us/topics/product/2020/updating-our-approach-to-misleading-information.html
- [7] Mike Isaac and Kellen Browning. 2020. Fact-Checked on Facebook and Twitter Conservatives Switch Their Apps. New York Times. (November 2020). Retrieved January 14, 2021 from <https://www.nytimes.com/2020/11/11/technology/parler-rumble-newsmax.html>
- [8] Jack Nicas, Mike Isaac, and Sheera Frenkel. 2021. Millions Flock to Telegram and Signal as Fears Grow Over Big Tech. New York Times. (January 2021). Retrieved January 14, 2021 from <https://www.nytimes.com/2021/01/13/technology/telegram-signal-apps-big-tech.html>
- [9] Callie Middlebrook. 2020. The Grey Area: Instagram, Shadowbanning, and the Erasure of Marginalized Communities. (March 2020). Retrieved January 19, 2021 from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3539721
- [10] Sharon Block. 2020. Erasure, Misrepresentation and Confusion: Investigating JS-TOR Topics on Women's and Race Histories. DHQ: Digital Humanities Quarterly 14, 1 (2020) Retrieved January 19, 2021 from <http://www.digitalhumanities.org/dhq/vol/14/1/000448/000448.html>
- [11] Charity Wright. 2020. Mass Migration of Users to Parler Prompts Concerns Over Security and Disinformation. Recorded Future. (November 2020) Retrieved December 11, 2020 from <https://www.recordedfuture.com/parler-phenomenon-mass-migration/>
- [12] Drew Harwell and Rachel Lerman. 2020. Conservatives grumbling about censorship say they're flocking to Parler. They told us so on Twitter. The Washington Post. (November 2020). Retrieved January 2, 2021 from <https://www.washingtonpost.com/technology/2020/11/23/parler-conservatives-still-on-twitter/>
- [13] Jonathan Shieber. 2021. Parler jumps to No. 1 on App Store after Facebook and Twitter ban Trump. TechCrunch. (January 2021). Retrieved January 15, 2021 from <https://techcrunch.com/2021/01/09/parler-jumps-to-no-1-on-app-store-after-facebook-and-twitter-bans/>
- [14] Jack Nicas and Davey Alba. 2021. Amazon, Apple and Google Cut off Parler, an App That Drew Trump Supporters. New York Times. (January 2021). Retrieved January 15, 2021 from <https://www.nytimes.com/2021/01/09/technology/apple-google-parler.html>
- [15] Kazutoshi Sasahara, Wen Chen, Hao Peng, Giovanni Luca Clampaglia, *et al.* 2020. Social influence and unfollowing accelerate the emergence of echo chambers. (September 2020). Retrieved January 14, 2021 from <https://link.springer.com/article/10.1007/s42001-020-00084-7>
- [16] Shahram Heshmat. 2015. What Is Confirmation Bias? People are prone to believe what they want to believe. Psychology Today. (April 2015). Retrieved January 15, 2021 from <https://www.psychologytoday.com/us/blog/science-choice/201504/what-is-confirmation-bias>
- [17] Parler. 2020. Guidelines. (December 2020). Retrieved December 18, 2020 from <https://legal.parler.com/documents/guidelines.pdf>
- [18] Twitter. 2020. Rules and policies. (December 2020). Retrieved December 18, 2020 from <https://help.twitter.com/en/rules-and-policies#twitter-rules>
- [19] Facebook. 2020. Community Standards. (December 2020). Retrieved December 18, 2020 from <https://www.facebook.com/communitystandards/>
- [20] Joseph Peters. 2021 'The MAGA Movement': Expert on white nationalism weighs in on D.C. protest crowd. The Denver Channel. (January 2021). Retrieved January 14, 2021 from <https://www.thedenverchannel.com/news/local-news/the-maga-movement-expert-on-white-nationalism-weighs-in-on-d-c-protest-crowd>
- [21] United States Capitol Police. U.S. Capitol Police Arrests - January 6, 2021. Retrieved January 14, 2021 from <https://www.uscp.gov/media-center/press-releases/us-capitol-police-arrests-january-6-2021>

- [22] Hannah Gais and Freddy Cruz. 2021. Far-Right Insurrectionists Organized Capitol Siege on Parler. SPLC. (January 2021). Retrieved January 14, 2021 from <https://www.splcenter.org/hatewatch/2021/01/08/far-right-insurrectionists-organized-capitol-siege-parler>
- [23] Annie Palmer. 2021. Amazon employees call for company to cut ties with Parler after deadly U.S. Capitol riot. CNBC. (January 2021). Retrieved January 10, 2021 from <https://www.cnn.com/2021/01/09/amazon-employees-demand-company-drop-parler-after-capitol-riot.html>
- [24] Igor Bonifacic. 2021. Parler's website is back up, but the service is still unavailable. Engadget. (January 18 2021) Retrieved January 24 2021 from <https://www.engadget.com/parler-website-back-201539015.html>.
- [25] Jack Nicas and Davey Alba. 2021. Amazon, Apple and Google Cut off Parler, an App That Drew Trump Supporters. New York Times. (January 2021). Retrieved January 15, 2021 from <https://www.nytimes.com/2021/01/09/technology/apple-google-parler.html>
- [26] Kianna Gardner. 2018. Social Media: Where Voices of Hate Find A Place To Preach. Public Integrity. (August 2018). Retrieved January 16, 2021 from <https://publicintegrity.org/politics/social-media-where-voices-of-hate-find-a-place-to-preach/>
- [27] Elizabeth Dwoskin and Craig Timberg. 2021. Misinformation dropped dramatically the week after Twitter banned Trump and some allies. The Washington Post. (January 2021). Retrieved January 16, 2021 from https://www.washingtonpost.com/technology/2021/01/16/misinformation-trump-twitter/?utm_campaign=wp_main&utm_medium=social&utm_source=facebook&fbclid=IwAR3zPMZeJPTiS68kpfm-b1sGGVFEhkBFsJH9k5H_pu8IHxg4RBDCBAOx7t8
- [28] Ballotpedia. 116th United States Congress. Retrieved January 24 2021 from https://ballotpedia.org/116th_United_States_Congress.
- [29] Ben Schreckinger. 2019. Amid censorship fears, Trump campaign 'checking out' alternative social network. Politico. (May 2019). Retrieved January 11, 2021 from <https://www.politico.com/story/2019/05/28/trump-campaign-twitter-1345357>
- [30] Jon Levine. 2021. Trump fans ditch Twitter en masse after president's suspension. New York Post. (January 2021). Retrieved January 15, 2021 from <https://nypost.com/2021/01/09/trump-fans-leave-twitter-after-presidents-suspension/>
- [31] Harry Stevens, Daniela Santamaría, Kate Rabinowitz, et al. 2021. How members of Congress voted on counting the electoral college vote. The Washington Post. (January 2021). Retrieved January 15, 2021 from <https://www.washingtonpost.com/graphics/2021/politics/congress-electoral-college-count-tracker/>
- [32] Jack Dorsey. 2021. Having to take these actions fragment the public conversation. They divide us. They limit the potential for clarification, redemption, and learning. And sets a precedent I feel is dangerous: the power an individual or corporation has over a part of the global public conversation [Tweet]. Twitter. (January 2021). Retrieved January 15, 2021 from <https://twitter.com/jack/status/1349510772871766020>