Building an Infrastructural Praxis:

Understanding Twitter's Embeddedness in the U.S.–Mexico Border

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Abstract

In this article, we document how Twitter is embedded within the U.S.-Mexico border and used to reorganize the oppressive conditions perpetuated by the border's sociopolitical history. We do so through a mixed-methods case-study of three polarized, yet tangled, activist movements on Twitter, each of which responded to Trump's border wall plans and zero-tolerance policy that separated asylum-seeking im/migrant children from their families. The hashtag movements included the liberal #FamiliesBelongTogether supporters (FBT), Trump Republican #BuildTheWall supporters (BTW), and liberal Anti-Wall (AW) #NoBorderWall and #TrumpShutDown denouncers. Findings indicate how the liberal activist movements inherited systemic issues of the broader U.S.-Mexico border infrastructure. Overall, we call for TPC to continue developing research agendas that learn from social activist networks so the field can understand its role in shaping the broader media infrastructure.

Introduction: The Infrastructural Maintenance of Oppression

Over the last decade, technical and professional communication (TPC) scholars have been developing methodologies that interrogate and mediate established power structures embedded in sociotechnical relations (Agboka 2013, Haas 2012, Jones 2016b, Rose 2016, Rose & Walton 2015). These works call TPC to theorize and study a more system-level perspective because technologies are not closed systems of activity but open and embedded across larger intersections of cultures and power. For example, Rose (2016) argues that social-justice approaches have created a need for TPC to extend beyond the more well-tread paths traveled between stakeholder and user relations alone because studying such a discrete level of interaction risks maintaining oppressive conditions for those who are already multiply marginalized. Williams (2014) also indicates how social-justice advocacy pushes our traditional role as user advocates "to a new and exciting level by focusing on historically marginalized groups and issues related to race, class, gender, and sexuality because these identity factors are not mutually exclusive" (87).

Among these developments to broaden TPC with social-justice approaches to designing communication technologies, the field has predominantly answered these calls with interdisciplinary human-centered design (HCD) methodologies. Sánchez (2017) surveys design approaches in TPC and identifies an artifact-driven approach, which is of course warranted to identify and remediate oppressive conditions (Jones & Williams 2018, Sánchez 2018, Sano-Franchini 2018) or empowering too often ignored cultural knowledge and experiences (Baniya 2020, Green 2021, Itchuaqiyaq et al. 2022). For instance, Gonzales' (2018) intersectional study of translation and captioning services identifies how captions maintained a monolingual English language bias rather than

develop diverse multilingual contexts and content, which impacts audiences who are hard-of-hearing and deaf. Jones and Williams (2018) demonstrate how literacy tests have been deployed historically as an election technology that makes it more difficult for multiple-marginalized people to vote. Studies such as these examine an individual's positionality as it intersects with social *and* technical histories at an interpersonal level. We extend such artifact-level studies as these by developing a TPC approach that documents how the design of digital platforms are embedded within infrastructure to organize power and oppression in particular ways.

In this article, we propose a praxis to understand how digital platforms are embedded in existing and ever-developing nation-state technologies of the militarized U.S.-Mexico border. We do so through a case that examines Twitter's *embeddedness* within the U.S.-Mexico border and how Twitter reorganizes and perpetuates oppressive conditions sustained by the sociopolitical history of the border. Specifically, we analyze three polarized yet tangled movements on Twitter: the liberal #FamiliesBelongTogether supporters (FBT), Trump Republican #BuildTheWall supporters (BTW), and liberal #NoBorderWall and #TrumpShutDown denouncers (AW, Anti-Wall). The FBT group responded directly to the impact of Trump's zero-tolerance policy that resulted in the separation of thousands of im/migrant children from their families. Conversely, the BTW group supported both Trump's zero-tolerance policy and increased militarization of the U.S.-Mexico border. The AW group centered U.S. citizens' concern about wildlife, landowners at the border, and government employees impacted by Trump's government shutdown. Before we explain our reasons for focusing on this case of Twitter activism and the U.S.-Mexico border, we explain our praxis as grounded in the term *embeddedness*.

Star and Ruhleder (1996) define the embeddedness of infrastructure as "'sunk' into, inside of, other structures, social arrangements and technologies" (113). They argue that the embeddedness of infrastructure matters because it documents how technologies have a complex relationship with hegemonies. Johnson (2017) adds that people in power invest in multiple technologies to produce an infrastructure that support their particular set of values, relations, and accompanying practices. Embeddedness focuses on how these values and relations become naturalized and consequently transparent and unproblematic to the majority of people who hold positions of privilege. Typically, hegemonic values, relations, and practices are centered and operationalized through infrastructure, which maintain historically oppressive social and technological arrangements of labor that perpetuate inequitable and unjust conditions for already marginalized groups. Yet we argue that TPC can play a role in remediating infrastructure's embeddedness to focus on establishing grounds for equity.

We see embeddedness as an important concept that can help extend TPC's role in taking up intersectional paradigms of knowledge and empowerment developed by Black feminist scholars. Specifically, we see commonalities with embeddedness and Collins' (2009) *matrix of domination*, which is a framework for documenting what intersectional social issues organize power and oppression. Her matrix includes four interdependent domains of power that organize relations in society: structural, disciplinary, hegemonic, and interpersonal. The *structural* domain studies how institutions are interconnected to reorganize oppression for those who are already marginalized. The *disciplinary* domain studies the management and control of power relations. As an example of structural and power domains, governments and businesses surveil marginalized communities on social media during activist movements to criminalize and detain certain movements over others (Biddle 2020). The *interpersonal* domain studies how the

everyday micro-level interactions of individuals support the maintenance of institutional power. Such interpersonal interactions are facilitated online through user experience design via reporting tools for community-based surveillance but also through artificial intelligence that personalizes individual user feeds along identity markers. Finally, Collins (2009) argues that the *hegemonic* domain encompasses all of these domains as a system of ideas that rationalize how power is organized and distributed.

Together these theories about how power is organized can illuminate how technologies embedded in matrices of domination maintain the wall between two main groups: people who have developed a critical consciousness about the embedded oppression operationalized by infrastructure versus those who benefit by any power imbalances it affords them. In our study of Twitter activism, we understand that digital platforms combine the structural and disciplinary domains of power because they are interlocked, i.e., embedded within existing structures of power *and* within existing technologies of disciplinary power. For example, *Wired* Editor Andrea Valdez (2018) discusses her experience of the lack of a more salient Latinx Twitter comparable to that of Black Twitter. She cites numerous possibilities, such as social-media surveillance of undocumented communities and the lack of common language, as a result of decades of the linguistic supremacy of English in the United States. Consequently, white people with assumed citizenship status often either ignore or do not recognize what people from marginalized groups experience and know, such as Valdez.

To help TPC scholars and professionals recognize and document unjust forms of infrastructurally embedded domination, we propose an *infrastructural praxis* (IP) framework that facilitates investigation into how power impacts the communication design of digital platforms. The infrastructure in IP emphasizes the work to critically reflect and address how digital platforms can

materially inherit systemic issues created by pre-existing policies and technologies. Praxis highlights how this reflection demands envisioning action toward justice (Jones 2016a) that empowers people whose sociotechnical knowledge and practices have historically been relegated to the margins (Shelton 2019). When put together, the goal of IP is to document existing oppressive conditions and ensure researchers and practitioners create futures that account for and mitigate existing social-historical problems. Based on the findings from our analysis, we propose the following the IP framework to help scholars and professionals document the embeddedness of digital platforms within matrices of domination This IP framework guides TPC to critically reflect on what we posit as three interdependent features of embeddedness: participation, framing, and event-drivenness.

Participation: Participation asks, "Who is centered?" within a technology's embeddedness, and "Who is empowered to participate versus suppressed?" Building on Chávez's (2012) *Queer Migration Politics: Activist Rhetoric and Coalitional Possibilities* and her work from queer scholars and women of color feminists*,* we argue that Twitter's position within a matrix of domination was impacted by the platform's embeddedness in nation-state borders and limited more equitable coalitional possibilities. As we discuss in our findings, the absence of im/migrant participation seems to also be linked to the providence afforded to activism that frames the issue through white-liberal citizenship.

Framing: Connected to questions of participation, framing questions how Twitter's embeddedness in U.S.-Mexico border politics contributes to the centrality of white worldviews about citizenship in FBT, BTW, and AW activist movements. It emphasizes questions about Collins' (2009) hegemonic domain of power because it analyzes how dominant beliefs about how the systems operate are normalized. Pertinent to this case, findings indicate how activist framing across all three HTGs perpetuate

border rhetorics and establish the historical framing that persists and the impact materially with the hyper-militarization of the U.S.-Mexico border.

Event-Drivenness: Event-drivenness asks how communication technologies structure how people experience time (Katz 1992, Sano-Franchini 2018) and thereby also the conditions by which we participate and frame our content. For example, Sano-Franchini (2018) observes how her personal content is fashioned cross-temporally on Facebook where she experiences knowledge and events from the distant past juxtaposed with contemporary associations. She argues that this temporal juxtaposition does not necessarily yield a more critical historicizing of knowledge and events, because digital platforms are embedded in our society's media ecosystem that privileges expediency over extended reflection. Sano-Franchini's claim derived from her interpersonal user experience is supported by macro-level studies (Benkler et al. 2018) that social media platforms are indeed in syncopation with the expedient event-driven rhythms of broader broadcasting news cycles. Overall, event-drivenness asks questions about how digital platforms operationalize a biased cultural value of time in relationship to Collins' (2009) interpersonal experience of ideas and events.

To understand Twitter's embeddedness within the matrix of domination, we derived the following questions from the IP about the its impact across FBT, BTW, and AW hashtag activist movements:

1. *Participation*: Out of the top 10 communities of targeting patterns across each period, what groups were tweeting, and who were they targeting?

2. *Framing*: What topics did these top groups amplify?

3. *Event-Drivenness*: How was time culturally organized, and how did it impact the participation, framing, and the material direction of the FBT movement?

Different oppressive conditions call for different applications of this IP framework, which is why we argue that an IP must situate its intersections of oppressive conditions of nation-states. For our case, we describe how border rhetorics help us document how digital platforms, such as Twitter, are embedded within the infrastructural history and development of the U.S.-Mexico border. In the next section, we review border rhetorics to critically reflect on this embeddedness and our positionality within the scope of the politics and rhetorics of this case. After situating the case within the rhetorics of the border, we present our research questions, describe our method, and share our findings across the 3 parts of the IP framework.

Situating the Case: Reflecting on the Embeddedness of Twitter within the U.S.– Mexico Border

Recall how Valdez (2018) discusses the absence of a more salient Latinx Twitter. This absence is amplified by the lack of unified hashtag movements mobilized by events impacting the Latinx community in 2018, such as Trump's suspension of DACA, heightened border militarization, and government-sanctioned family separation in parallel with news cycles saturated about migrant caravans approaching the US-Mexico border. Contrasting her struggles to find Latinx social spaces online with that of Black Twitter, Valdez breaks down the struggle to unify Latinx communities online as a consequence of the diversity of the

community across generational, linguistic, and nation-state lines.[1] This struggle to unify has helped the Latinx community to avoid the surveillance and scrutiny faced by Black Twitter, but the invisibility of the community has also hindered the activism originating within the community.

This study explores this problem that Valdez (2018) highlights with her expert experiences online. In the place of a movement mobilized by Latinx Twitter, a network of activist and legal organizations called #FamiliesBelongTogether (FBT) sparked a national movement across social media during the summer months of 2018. This national movement drew attention to the Trump Administration's zero-tolerance policy for immigration offenses at the US-Mexico border, which included the immediate separation of children from their families when detained. In response to this policy, the FBT movement raised awareness of the policy's consequences, organized a national march that called on politicians to reunite over 3,000 children with their families, and lobbied for the retraction of the zero-tolerance policy.

The FBT network heavily utilized social media platforms to mobilize their cause, collaborating with Latinx celebrities like Lin-Manuel Miranda, America Ferrera, and high-profile Democrat politicians to shame the Trump administration for the cruelty of family separation. Despite all of the media attention that the FBT movement garnered in 2018, our research into the FBT movement noticed how momentum toward substantial immigration reform was elided along the way and still remains unpursued. For instance, the original motivation for this project stems from our personal struggle to understand the relative silence that we noticed within the FBT movement on Twitter, surrounding the deaths of

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[1] We acknowledge how Black and Latinx are not mutually exclusive. Black Latinx participate actively in #BlackTwitter to amplify issues related to Black Latindad (Novak, Johnson, & Pontes 2016).

Darlyn Cristabel Cordova-Valle (age 10), Jakelin Caal Maquín (age 7), Felipe Gomez Alonzo (age 8), Juan de León Gutiérrez (age 16), Wilmer Josué Ramírez Vásquez (age 2), Carlos Hernandez Vásquez (age 16), and Mariee Juárez (age 20 months) in ICE camps from fall 2018 through summer 2019.

For so little attention to be paid to children dying, it seemed to us that something must have gone wrong for so little time to be spent mourning and fighting for these children and their families. As two white researchers, we struggled to understand how preliminary findings indicated how participation in the FBT movement waned as children died while participation on Twitter increased in related anti-wall discourse about environmental concerns and the economic impact of Trump's government shutdown. These seven children and others whose lives were cut short in ICE camps deserve national outrage. We recognize, too, that national outrage is not the same as justice, even for children, as we saw following the murders of Trayvon Martin (age 17), Michael Brown (age 18), Tamir Rice (age 12), Adam Toledo (age 13), and Ma'Khia Bryant (age 16) among too many others killed by police in the U.S. Rather, we draw attention to the profound influence of the white citizen worldviews regarding the border, citizenship, and activism at work in responses to this humanitarian crisis.

We offer this above reflection because our personal experiences with this case-study participate in the consequences of not engaging conceptions of digital platforms outside of whiteness and as partitioned from other aspects of infrastructure. Additionally, the FBT coalitions led the way toward the retraction of the zero-tolerance policy and halt on Trump's border wall plans on paper. Yet indefinite detainment persists, and Biden's administration and Democratic majority in the House have only changed the *type* of military investments the U.S. is making at the border.

Indeed, on President Biden's first day in office, he signed an executive order to pause the construction on former President Trump's U.S.-Mexico border project. However, a report published by the Immigrant Defense Project's Surveillance, Tech & Immigration Policing Project, and the Transnational Institute (Aizeki et al. 2021) notes how Biden's subsequent US Citizenship Act of 2021 included plans to use "smart technology" to secure the southern border. The report emphasizes that Biden's surveillance plan operates under a long-standing American "logic of deterrence" (1) that operates across the American political spectrum led by both Republicans (conservatives) and Democrats (liberals). Just as the Trump administration made border-crossing a brutally traumatic experience to deter asylum-seekers, Biden's smart technological surveillance plans maintain the American cultural logic of deterrence but by different means. Whether the militarized border employs the spectacle of a wall or a subversive and covert set of surveillance technologies, these infrastructural investments build upon the historical continuity of white American settler colonizing practices across American Republican and Democrat political lines.

These infrastructural border projects, and the racist logics of deterrence driving them, come as no surprise to rhetoricians who study the US-Mexico border's role in the rhetorical construction of U.S. citizenship and the alienization and dehumanization of non-citizens as disposable, containable, and deportable via intersections of race, gender, class, ethnicity, sexuality, and culture border rhetorics (Cedillo 2020; Cisneros 2011; DeChaine 2009, 2012). DeChaine (2009) defines alienization as the "antidote" to the constructed threat that im/migrants pose to American unity. For instance, Trump's gross characterization of asylum-seekers as threats to American jobs and as criminal gang members and rapists only echoes the longer arc of American ideals driving immigration policies and infrastructural investments to increasingly militarize (Chávez 2012; Robinson Chávez 2017; Silva 2015) and surveil

(Cedillo 2020, Levinson-Waldman 2019, Licona & Maldonado 2014) the U.S.-Mexico border. To better understand how Twitter is embedded in U.S.-Mexico border rhetorics, we applied a mixed-method analysis, which we outline in the following section.

Method

To better understand a systemic perspective of who and whose knowledge was being amplified on Twitter, we conducted a mixed-methods social network analysis (Freelon et al. 2016, Rosvall et al. 2009) of approximately 5.6 million tweets collected between January 2018 and February 2019. In the following subsections, we describe our data collection, sampling, and analysis methods that helped us develop the reported findings.

Data Collection

We collected the tweet data between 01/01/2018 and 02/28/2019 by scraping tweets with the keywords listed below (Table 1) across the 3 HTGs. We used a custom Python script that primarily used a code library named TWINT (Twitter Intelligence Tool) (2017/2021): a scraping tool written in the Python programming language.

Table 1. List of keywords used to collect available tweets, including their respective top date ranges, trending date (if applicable), and total number of tweets.

Keyword(s)	Top Date Ranges	Initial Trending Date	Total Number of Tweets
Left: Families Belong Together			
#familyseparation	06/17/18-06/23/18	Tue, 19 Jun 2018	18,695
#familiesbelongtogether	06/14/18-07/02/18	Fri, 01 Jun 2018	228,656
Felipe Alonzo-Gomez	12/26/2018	--	1729
#keepfamiliestogether	06/17/18-06/30/18	Wed, 20 Jun 2018	113,732

Jakelin Caal Maquín / #maquin	12/15/18- /12/16/18	--	3,255
#wherearethechildren	05/26/18- 05/29/19	Sat, 26 May 2018	119,106
Left: Anti-Wall			
#noborderwall	03/20/18 01/08/19- 01/11/19	Thu, 15 Feb 2018	12,504
#shutdownstories	12/24/18- 01/25/19	--	30,936
#trumpshutdown	12/21/18- 01/25/19	Thu, 18 Jan 2018	696,176
Right: BTW Trump Supporters			
#bordercrisis	06/18/18- 06/26/18 01/07/19- 01/20/19	--	14,157
#bordersecurity	12/11/18- 02/15/18	Wed, 09 Jan 2019	62,026
#buildthewall	12/11/18- 02/19/19	Wed, 09 Jan 2019	1,572,322
#caravaninvasion	10/22/18- 11/05/19 11/25/18- 11/28/19	Mon, 22 Oct 2018	21,553
#illegals	06/20/18- 06/24/18 01/08/19- 01/11/19	--	2,007,743
#migrantcaravan	10/19/18- 11/05/18 11/25/18- 11/30/18	Fri, 19 Oct 2018	27,153
#nationalemergency	01/04/19- 01/12/19 01/25/19- 01/28/19 02/14/19- 02/19/19	Thu, 14 Feb 2019	703,088
#ronilsingh	12/28/18- 12/30/18	--	9,606
Total			5,642,437

Why These Keywords?

Keywords were chosen based on two main factors. First, we collected significant hashtags and key terms used to circulate tweets about events pertaining to Trump's proposed border wall. The original keywords included the May and June 2018 trending hashtags that gave presence to the Trump administration's actions to separate hundreds of children from their families: #FamiliesBelongTogether, #FamilySeparation, #KeepFamiliesTogether, and #WhereAreTheChildren. From there, we tracked additional trending hashtags, such as #MigrantCaravan and #CaravanInvasion in Fall 2018, the #NationalEmergency hashtag, and related hashtags, such as #TrumpShutdown and #ShutdownStories.

Trending hashtags were not the only criteria. We also included important events that did not trend on Twitter. For example, #BlackTwitter and #BlackLivesMatter hashtag communities created hashtags for the victims of police brutality and murder, such as #MichaelBrown, #EricGarner, #TamirRice, or #SandraBland. These viral hashtags amplified the historical issue and sustained national discourse and activism (Freelon, McIlman, & Clark 2016). The FBT HTG used this hashtag movement for children who died under the internment of the Trump administration. Yet these hashtags never trended. Despite this fact, we deemed it important to include these hashtags because these were key events during the ongoing controversy.

Why This Timeframe?

We choose this timeframe to study how the discourse surrounding immigration and the border wall may have changed over time in response to the detention camps, family separations, and caged children during the summer months. We end the timeframe after Trump's call for a "national emergency" and government

shutdown in late February because these marked definitive events surrounding political moves in response to the denial of Trump's border-wall proposal.

Periodization

In following with past studies of social-media activism, we needed to define event-driven periods of tweet activity to contextualize our findings. Our cross HTG approach presented us with challenges to this typically more straightforward process conducted with one hashtag movement alone. Typically, studies will compute the median and mean number of tweets per day to define a baseline norm of tweets per day. Any spikes and subsequent returns to baseline in activity help define the periods. Because we incorporated 3 distinct but interrelated movements, we needed to decide to either combine all of the groups together or keep them separate with their respective periods.

We chose to combine all of the groups for multiple reasons and defined 10 periods of event-driven activity. If we defined periods per HTG, we would need to track different periods of activity. If this approach would have been taken, the FBT group would have only 3 periods total, the AW group would have had 4 periods, and the BTW group – the most consistently active group – would have had 9 periods. Sometimes these periods would overlap in somewhat harmonious ways in activity, but other times not so much.

We instead focused on the cumulative spikes in activity to capture the broader event cycles of discourse on Twitter. Our period definitions were supported by comparing and contrasting the spikes in cumulative activity in a temporal chart against a timeline of major news events that Fernandes created. By tallying them together, each group's particular spike in activity took precedent with the periodization, pushing another group's set of tweets with potentially fewer results to consider within that timeframe. For

example, after periods 2 and 3, the FBT group did not have any more spikes in activity. Accordingly, their periodization was impacted by the BTW group in periods 5-7 and the AW group in periods 8-10. Importantly, these 10 periods and their event-based contexts enabled us to compare and contrast what particular HTGs amplified per period against results of participation.

Sampling Detected Network Communities

Based on our questions of participation, framing, and event-drivenness, we needed a sampling method that could organize the HTGs per period by their interconnectedness so we could sample tweets from the top subgroups of activity for qualitative analysis. To identify top subgroups within the periodized networks, we detected network communities per HTG for each period with the infomap algorithm (Rosvall, Axelsson, & Bergstrom 2009). Infomap specializes in identifying the persistence of source-target patterns within a network, which helped us reduce the data to qualitatively analyze a meaningful sample to 1) name these top subgroups, referred to as *communities*, and 2) name the main topics amplified by these subgroups.

In this case, this pattern was users (source nodes) who mentioned other users (target nodes) within their tweets. This method organized the corpus into small numbers of large communities and large numbers of small communities. We used the nttc (Lindgren 2020) Python software to sample the top 10 in keeping with similar previous social-network analyses (Freelon, McIlman, & Clark 2016) as respective lists of nodes (users) and edges (links between users, from source to target) across each HTG per period. We used these lists to cross-reference the top 10 users, i.e., what Freelon, McIlman, and Clark (2016) refer to as *hubs* (24), within the top 10 communities across each period. Freelon McIllman, and Clark contend that hubs are the smaller subset of highly mentioned and/or retweeted users within the larger detected community. By identifying these

hubs, we could isolate topics amplified by the top detected communities.

Qualitative Community Hub and Topic Labeling

We focused our qualitative labor on the two liberal HTGS—AW and FBT—due to our interest in how participation impacted activist support of those being oppressed. We used the node-list organized by community hubs across each period to sample representative top tweets from the possible top 10 users within the hubs of the detected communities (*n*=1427). In a spreadsheet program, we inductively labeled both the community hubs and topics based on the representative users and their tweets. This labeling enhanced our analysis because we could count and track network hub participation and framing over time with contextual description.

Findings

Through our analysis, we found how Twitter's embeddedness within the U.S.-Mexico border racialized and "bordered" hashtag activism to reproduce the hegemonic logics of white citizenship across our 3 research questions informed by the IP concepts: *participation*, *framing*, and *event-drivenness*.

1. Participation: Digitally Bordering the Im/migrant Experience

Other hashtag movements, such as #ArabSpring, #BlackLivesMatter, and #MeToo, included prominent participation from the people impacted by the institutional and infrastructural establishments (Freelon, McIlwain, & Clark 2016; Tufekci 2017)—voices of resistance against their oppressive

conditions. Yet our study of the FBT movement reveals an absence of im/migrant participation. In this section, we report who the main groups of detected community hubs were, and who these hubs targeted in their tweets to understand how border rhetorics impacted participation.

Whose tweets were amplified? Im/migrant participation was not prominent within top hubs across the FBT movement, but neither was participation across users using the FBT hashtags more generally. Out of 10 periods, FBT's highest ratios of activity occurred in its initial 3 periods, when compared with the other 2 hashtag groups: 2 (62.03%), 3 (82.79%), and 4 (44.58%) (see Figure 1). These periods occurred during its initial national attention, after the breaking news about Trump's zero-tolerance policy and family separations, which culminated in the FBT march in D.C. Yet it accounted for only 8.8% of the total tweets when combined across the 3 hashtag groups. Overall FBT participation started strong, but nationalist BTW supporters were consistently more prominent across all periods, and AW spiked in response to the impact of Trump's shutdown on citizens, despite the deaths of children and horrible conditions of the camps. FBT participation waned considerably during periods 5-10 while activist organizations and influencers attempted to sustain the movement during those latter periods.

FBT starts out strong immediately after Trump's zero-tolerance policy is enacted in period 2, but FBT participation then wanes as citizen-focused groups, such as the nationalist BTW and liberal AW groups, spike across later periods
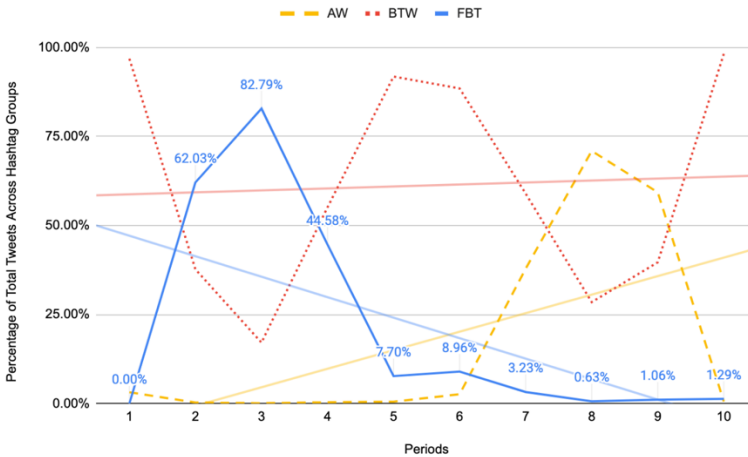
Figure 1. Temporal line chart indicating percentage of total tweets across all hashtag group per period. Trendlines highlight linear progression over time.

Users in FBT hubs were often mixed among composite groups. For example, activist organizations and liberal social media influencers, such as actress Alyssa Milano, both frequently targeted the same democrat elites, and this overlap in participation with democrat elites is emphasized in the heatmap matrix below (Figure 2). Activist organizations and liberal social media influencer hubs also consistently received the most frequent and highest amount of circulation, so they often impacted who was included and excluded from the topics. For instance, note how the immigrant responder hub, who is the most representative of im/migrants, appears in the top 10 communities only twice. Overall, we can only speculate that those directly impacted by the U.S.-Mexico border rhetorics received were either not visibly participating (cf. Valdez 2018) or there was very little amplification of potential accounts among the top hubs.

Other hubs of note included individual liberals (i.e., clusters of individuals who shared similar targeting patterns) who were very active throughout periods 2-4 but whose activity declined thereafter. FBT participation also included online conspiracy groups like QAnon who attempted to co-opt FBT hashtags during heightened activity in periods 2-4 as well as single targeter hubs that included a lone individual who targeted a mass set of other accounts. Single-targeter hubs are another result of FBT's thin participation after period 4 because these single accounts were detected within the top 10 groups based on their circulation relative to other sustained participation by activists.

	Activist org	Democrat elite	Liberal influencers	Individual liberal	qanon	Single targeter	America First	Immigrant responders	Republican elite	tweetiatricians
Activist org	18	15	9	2	2	0	0	0	1	0
Democrat elite	15	6	6	4	3	0	1	0	1	0
Liberal influencers	9	6	8	9	1	0	0	0	0	0
Individual liberal	2	4	9	8	4	2	1	0	0	0
qanon	2	3	1	4	5	0	2	0	0	0
Single targeter	0	0	0	2	0	4	0	0	0	0
America First	0	1	0	1	2	0	0	0	0	0
Immigrant responders	0	0	0	0	0	0	0	2	0	0
Republican elite	1	1	0	0	0	0	0	0	0	0
tweetiatricians	0	0	0	0	0	0	0	0	0	2
total	48	36	34	30	17	6	4	2	2	2

Figure 2. Heatmap matrix of detected FBT community hubs that included intermixed groups, due to similar user targeting patterns within a period.

Both of the AW and FBT HTGs secured democrat elite attention (Figure 3). However, recall how the AW participation spiked in response to the political theater of Trump's government shutdown during later periods (Figure 1) while Democrat elites neglected to participate in the FBT HTG as children were dying in ICE detention camps. Overall, Democrat elites seemed to shift their focus from FBT participation to the border wall's impact on citizens instead of asylum-seeking people.

Democrat elites participated and are circulated widely in the FBT HTG during the first 3
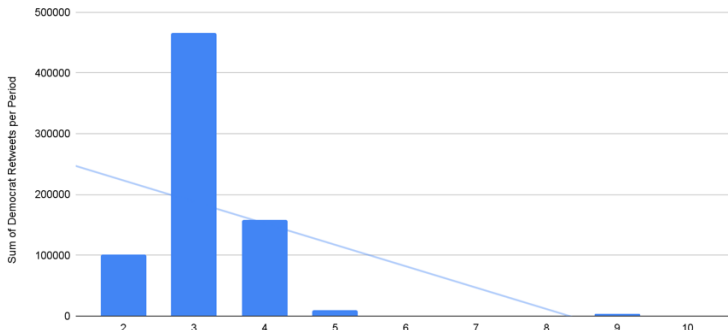periods, but their participation waned during subsequent periods

**Figure 3. Based on retweet counts over time, Democrat elites'
participation in FBT only occurred substantially in early periods.**

Who's being targeted? Participation also involves who people
target by tagging their Twitter handles. FBT's top hubs heavily
targeted Trump and the Trump administration. The sum of
Trump-centered average (mean) flow scores within the top 10 hubs
accounted for approximately 40% of the targeting activity within
the FBT corpus (Figure 4).

AW activist organizations focused on environmental issues and property ownership in relation to Trump's
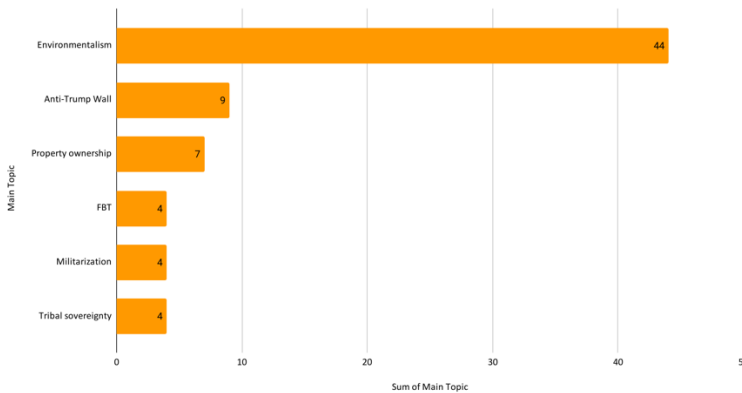wall project

**Figure 4. Average (mean) infomap flow score across all periods put
into comparison with the sum of times the accounts were targeted
across all periods within the top 10 community hubs.**

In Figure 5, we triangulated these targeting results across multiple network measures that identify central actors within a network. We applied a multiple correspondence analysis[2] that identified inter-relational patterns among the following measures: centralities of betweenness, closeness, and eigenvector, and infomap's flow score. The results revealed how all 3 HTGs heavily targeted Trump, Trump's administration, and other political elites.
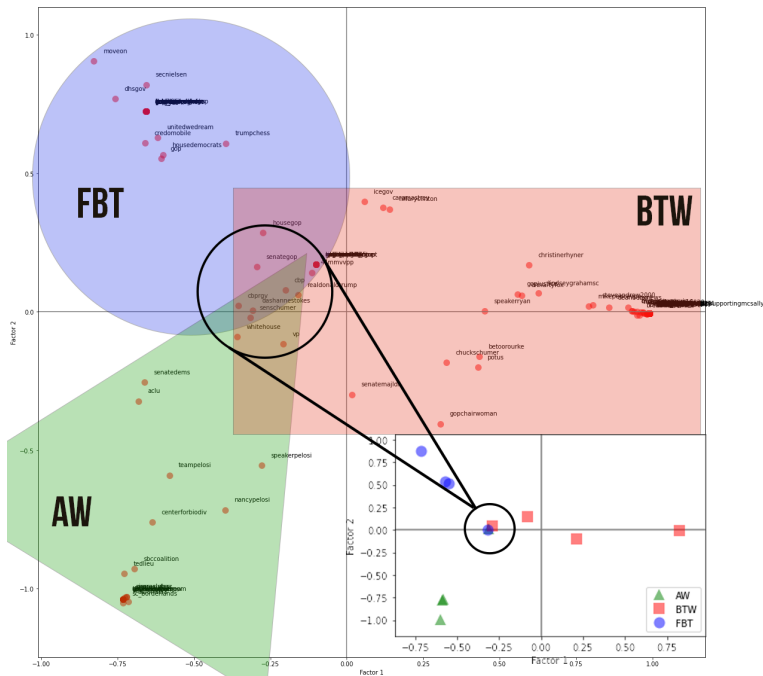

Figure 5. Visualized results from a multiple correspondence analysis across 4 node (user) importance measures: centralities of betweenness, closeness, and eigenvector, and infomap's flow score.

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[2] A multiple correspondence analysis (MCA) normalizes multiple categorical data by defining them in terms of each other for the purpose of mapping their variance to identify hidden patterns among the dimensions. We used the Python module *mca* (Şafak, 2014/2021) to conduct it, and see Abdi and Valentin (2007) for more information about MCA.

Main figure displays *top central users* within each hashtag group, while the bottom-right embedded figure aggregates the results at a *per hashtag group* level.

Targeting political elites is a common activist practice (Freelon, McIlWain, & Clark 2016, 2018). Yet direct im/migrant participation and their amplification in both authoring and targeting were nearly null. Consequently, liberal FBT and AW activist organizations and influencers stood in for un/documented and asylum-seeking groups, which impacted the second issue: *framing*.

2. Framing: Watching Whiteness at Work

FBT's activist organizations towed much of the line throughout all of their active periods (2-10) but especially so in latter periods 5-10. They mainly targeted the Trump administration, and this targeting pattern impacted the top 10 circulated topics across 3 consolidated period ranges (2-4, 5-7, and 8-10). Activists and influencers unsurprisingly emphasized the Trump administration's role in enacting a cruel policy that deliberately separated children from their families (see Table 2). They specifically focused on Secretary Nielsen's responsibility throughout all of the period ranges.

Table 2. Top 10 FBT activist organization topics, including mixed hub compositions, across 3 ranges of available periods: 2-4, 5-7, and 8-10. Results based on the weighted sum of infomap scores for each period multiplied by the percentage of total FBT tweets to total tweets overall within a respective range.

Period Ranges		
2-4	5-7	8-10
Top 1-5 Topics 1. Cruelty of policy 2. KFT Act 3. Family Separation 4. Secretary Nielsen 5. ICE Camp Visit	1. Cruelty of policy 2. FBT publicity 3. Family Separation 4. Holiday season 5. Secretary Nielsen	1. Family Separation 2. Cruelty of policy 3. Death of child 4. Illegality of policy 5. Nielsen hearing
Top 6-10 Topics 6. Missing children 7. Zero tolerance policy 8. Political theater 9. Illegality of policy 10. Gun violence awareness	6. Non-US FBT 7. Sponsor data 8. Zero-tolerance policy 9. Press coverage 10. Inhumane camp conditions	6. GOP Nazism 7. Call politicians 8. Anti-wall 9. Trump Shutdown 10. Trauma of detention and separation

We found slight variations in topical focus. During the initial periods (2-4), FBT responded to the policy by framing children separation as children who had gone missing. During periods 5-7, some press coverage of the FBT movement and the camp conditions were circulated, including a *60 Minutes* spotlight. This period also included adjacent movements among the top 10, including family separations occurring in Ireland. During the final periods (8-10), more mixed hub compositions with activist organizations included anti-wall sentiments with the Trump government shutdown, which included calls-to-action such as contacting local representatives. Additionally, this range included

some individual liberal accounts that compared ICE camps and their stories of detainee trauma with the Nazi regime's brutality against Jewish peoples.

To help put these topics into perspective with the overall FBT participation across all HTGs, we compared the infomap flow scores across these period ranges and weighted the scores based on the FBT tweet activity in relation to the overall tweet totals per range. In Figure 6, we highlight the reach of these top topics by sorting them and applying a color gradient across the respective infomap scores which emphasizes their consistent targeting and messaging of the border problem as partisan. Note how the death of children and coverage about ICE camp conditions during latter periods never instigated coalitional building on Twitter among political elites and individual liberal accounts in the wake of the political theater of Trump's government shutdown.

Period 2-4 Topics	Sum of Weighted Infomap Scores per Period			Sum of Weighted Infomap Score per Period Range
	2	3	4	
Cruelty of policy	0.02501	0.00033	0.09053	0.11587
KFT Act	0.01185	0.06134	0.00000	0.07319
Family Separation	0.00000	0.00000	0.07006	0.07006
Secretary Nielsen	0.00000	0.00000	0.07006	0.07006
ICE Camp Visit	0.00000	0.06341	0.00000	0.06341
Missing children	0.05324	0.00233	0.00088	0.05645
Zero tolerance policy	0.00000	0.05454	0.00000	0.05454
Political theater	0.00000	0.05454	0.00000	0.05454
Illegality of policy	0.02882	0.00000	0.00000	0.02882
Gun violence awareness	0.02372	0.00000	0.00000	0.02372

Period 5-7 Topics				Sum of Weighted Infomap Score per Period Range
	5	6	7	
Cruelty of policy	0.00172	0.00673	0.00198	0.01043
FBT publicity	0.00042	0.00979	0.00000	0.01021
Family separation	0.00041	0.00685	0.00198	0.00924
Holiday season	0.00000	0.00648	0.00038	0.00685
Secretary Nielsen	0.00090	0.00276	0.00000	0.00366
Non-U.S. FBT	0.00000	0.00382	0.00038	0.00420
Sponsor Data	0.00000	0.00276	0.00000	0.00276
Zero tolerance policy	0.00090	0.00000	0.00000	0.00090
Press coverage	0.00000	0.00026	0.00053	0.00079
Inhumane camp conditions	0.00000	0.00000	0.00053	0.00053

Period 8-10 Topics				Sum of Weighted Infomap Score per Period Range
	8	9	10	
Family separation	0.00071	0.00064	0.00000	0.00135
Cruelty of policy	0.00049	0.00042	0.00000	0.00091
Child death	0.00061	0.00006	0.00000	0.00067
Illegality of policy	0.00040	0.00000	0.00000	0.00040
Nielsen hearing	0.00040	0.00000	0.00000	0.00040
GOP Nazism	0.00010	0.00013	0.00010	0.00032
Call politicians	0.00022	0.00000	0.00000	0.00022
Anti wall	0.00022	0.00000	0.00000	0.00022
Trump shutdown	0.00022	0.00000	0.00000	0.00022
Trauma	0.00000	0.00019	0.00000	0.00019

Figure 6. Top 10 FBT topics across 3 ranges of available periods: 2-4, 5-7, and 8-10. Results emphasize the circulation of a topic based on the weighted sum of infomap scores for each period multiplied by the percentage of total FBT tweets to the total tweets within a respective range.

The AW activist organizations framed the border-wall issue in more obvious U.S. citizen-based terms. Most activist organizations, such as the Center for Biodiversity and Sierra Club, maintained the

movement by focusing on it as an environmental (44) problem; namely, a detriment to public land preservation and endangered species who inhabit it (see Figure 9). The AW activist groups also privileged citizens and landowners as the driving force by which to understand and respond to Trump's wall plans.

AW activist organizations focused on environmental issues and property ownership in relation to Trump's wall project
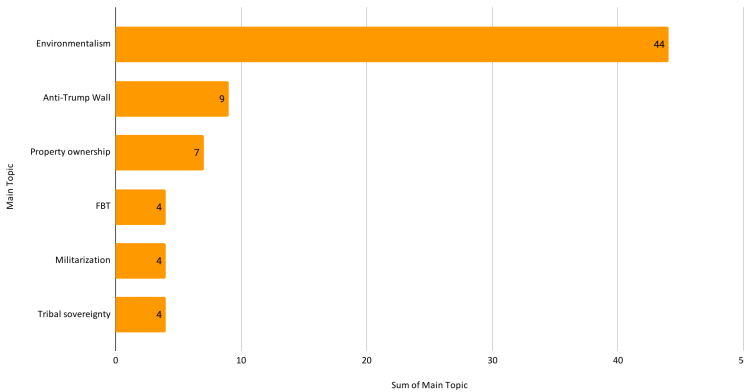

Figure 7. Top 5 AW activist organization topics across all periods (1-10), based on sum totals across the top 10 community hubs per period.

3. Event-Drivenness: The When of Participation and Framing Matters

While hashtag activism has been criticized for its limitations (Engles 2017, Murdock 2013), it also operates as a vital platform for resistance within the broader media infrastructure. Past studies (Freelon, McIlwain, & Clark 2016; Tufekci 2017) show how on-the-ground communities relied on shocking events to spark national responses across digital platforms. Yet our findings within the available data indicate a different pattern because the event-driven nature of the FBT movement was impacted by white liberal participation and framing as it is embedded within the structured timing of the U.S. political calendar.

For example, the FBT movement mobilized immediately after the zero-tolerance policy with online participation that organized national protests, representing the strongest engagement with family separation. Subsequently, the relative silence surrounding the deaths of children in camps in late 2018 coincided with the bipartisan battle over Trump's border wall and Trump's federal government shutdown. During this time, both FBT and AW focused on the political theater of the wall in syncopation with the U.S. midterm elections, e.g., Trump's government shutdown and AW on the financial impact of the wall and shutdown on citizens. This U.S. political calendar also seemed to impact FBT's calls for accountability, calling and lobbying for Secretary Nielsen's resignation, the reversal of the zero-tolerance policy, and the defunding of Republican-owned for-profit prisons. These all seem like progressive moves, but hindsight revealed how these procedural, personnel, and monetary border changes were superficial revisions rather than infrastructural and institutional shifts from logics of deterrence and alienization. For example, Nielsen indeed oversaw these horrors during her tenure. Yet her resignation in April 2019 amounted to very little in terms of policy or procedural change. Family separation continued under Nielsen's replacement Kevin McAleenan, a former border officer, who continued to work with the primary author of the zero-tolerance policy Stephen Miller (Franzblau 2019; Montoya-Galvez 2020a, 2020b). Furthermore, her resignation may have unfortunately only intensified Miller's efforts because later leaked official White House memos revealed how Nielsen was the lone voice of dissent prior to the enactment of the zero-tolerance policy (Coppins 2018, Gamboa 2020).

FBT's emphasis on Nielsen in particular omitted how the family separation problem was a feature of the United States' white-citizen centered infrastructure of mass incarceration and settler-colonialism. During and shortly after the U.S. political midterm election cycle in periods 5-10, liberal coalitions, such as AW and the

broader use of #trumpshutdown and #shutdownstories by individual liberals, indicate how center-left attention pivoted to the economic impact of the wall on citizens over im/migrants and asylum-seekers. Overall, these events were driven by values placed on U.S. citizen-political timings over the historical events linked to the FBT movement's main goals to support asylum-seeking families and children.

Conclusion and Implications

Our findings about the inter-relations between participation, framing, and event-drivenness only begin to document Twitter's embeddedness in the continued oppression of asylum seekers and im/migrants. In this case, we argue that Twitter's embeddedness within U.S. and Central American nation-states made more visible the alienizing practices beyond the more easily recognizable extreme expressions of racism by more conservative movements, such as BTW. Findings demonstrate how the liberal FBT and AW activist movements respective participation and framing largely applied a white-racially framed definition of citizenship. Additionally, non-citizen im/migrant peoples did not visibly participate, except as images circulated by activist organizations to evidence the cruelty of the Trump administration. We speculate that this invisibility is the consequence of the U.S. nation-state's weaponization of social media by surveilling of these communities (cf. Levinson-Waldman 2019; Ramos 2021; Valdez 2018). Other factors could be at play, such as use of other apps, such as Whatsapp, or other platforms that are more accessible and widely used in transnational and multilingual contexts. However, by understanding Twitter as a walled garden that privileges particular demographics over others, such as center-left liberal users (Freelon 2019), TPC can raise more questions about the potential link between participation and how messages are framed within the rhythms of the broader media infrastructure.

When examining the influence of participation and framing within the scheme of event-drivenness, we also argue that it is worth challenging the effectiveness of event-driven activism and especially digital platforms that privilege expediency to address ongoing humanitarian crises involving incarceration and separation. Indeed, at the same time that at least seven children died in ICE custody, thousands of others sustained life-altering trauma as a consequence of the history of border rhetorics. We found that the FBT movement successfully challenged the zero-tolerance policy itself and the defunding of corporate-funded ICE detention camps to discourage citizens from materially supporting border detention. Although their boycotts coincided with events at the border, we see possibilities for sustained engagements for justice that do not frame the events as isolated partisan violence but on the historical-contemporary link of these everyday violences of border rhetorics. For example, the ongoing pandemic has drawn attention to how everyday life is structured by domination, as stay-at-home orders highlighted how many undocumented workers are "essential" to daily life at great personal risk of deportation and illness (Jordan 2020).

How might activist movements take up the cause of essential non-citizen workers to move for policy change? Overall, we argue that if digital platforms continue to scale up their networked, international reach, then TPC can play a role in holding them responsible and accountable for their evolving embeddedness within and across existing nation-state borders. We put forward an infrastructural praxis to build on TPC's aims for such material advocacy and action by documenting the metes and bounds that define who can participate and share their stories and experiences safely and equitably within the designed event-drivenness of our media infrastructure. Indeed, how can TPC continue to develop new methods that document and remediate structural and disciplinary issues, such as:

- How government and businesses must account for how they participate in nation-state border militarization and surveillance;
- Whose nation-state experiences digital platforms center around. For example, Shelton's (2019) *On Edge: Technés of Marginality* could also address alienizing practices and empower the knowledge and experiences of asylum-seekers and people who are undocumented; and
- How temporal factors impact the advocacy and remediation of existing capitalistic news-media and trending cycles.

As we conclude, we pause to reflect on the fact that advocating for infrastructural change has its challenges. Recent leaked reports from within Twitter (Dwoskin et al. 2021) and other social media platforms (Murphy, Kelly, & Duffy 2021; Zubrow et al. 2021) indicate that these companies are well aware of their embeddedness and influence in our daily, individual lives. It is not surprising that the macro-level perspective that big data studies provide them does not guarantee that macro-level changes will be valued and enacted by those with the power to do so. Indeed, knowing that oppression exists, persists, and that a digital platform is complicit in the perpetuation of oppression is often not the problem at all. Unfortunately, TPC is situated in a society where user interactions are privileged as revenue generators (Birch et al. 2021) rather than sites of diverse socio-technical experiences. Consequently, digital platform leaders with decision-making power are not currently held accountable to center the most marginalized of users, to protect them from harm, and thereby create safer spaces for all. Ultimately, then, this IP framework clashes against existing white-citizen focused capitalistic design strategies that seek to maximize the monetization of peoples' digital communication practices. However, if TPC documents these forms of digital bordering, and how activists resist or conform

to the nation-state borders of digital platforms, we maintain hope that such documentation can instigate future policy and regulatory changes to build more socially-just forms of embeddedness.

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