

Parallel Ports

Sociotechnical Change from the Alt-Right to Alt-Tech

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Before the insurgence of the so-called ‘Alt-Right’ into contemporary political discussion, white supremacists have long used the internet as a means to organize and share information.¹ Early adopters of email and bulletin board technology – organizations such as the Aryan Nation and the Ku Klux Klan – saw great possibilities for using networked communication technology to circumvent social, physical and legal restrictions on the expression of racism and antisemitism. Sites like Aryan Liberty Net (1984) and Stormfront (1995) provided early platforms for the sharing of racist propaganda, novel means of organization and recruitment, and new tools to harass and intimidate vulnerable populations (Berlet 2008).² The increasing ubiquity of online communication has allowed white supremacist groups to grow and transform, preserving the movement’s knowledge and tactics for decades.

More than a tool for communication, social media platforms are increasingly condemned for supporting the organization of a broad base of white supremacists. One key event, The Unite the Right Rally, held on August 2017 in Charlottesville, North Carolina, was organized by a broad coalition of white supremacists, many of whom were highly active online. This violent gathering led to the death of Heather Heyer and the injury of dozens of others. Much of the subsequent criticism lodged against social

1 | According to the Associated Press Style Guide, references to the “Alt-Right” should always be in quotes. For more information, see: <https://blog.ap.org/behind-the-news/writing-about-the-Alt-Right>

2 | Southern Poverty Law Center (2015): “Stormfront: A History”, 25 March 2015 (<https://www.splcenter.org/hatewatch/2015/03/25/stormfront-history>).

media companies concerned the failure to enforce their own ‘Terms of Service’ contracts in the lead up to the rally. Corporations such as Google (including Youtube), Twitter, Facebook, Cloudflare, GoDaddy, AirBnB, Uber, Paypal, Discord, Patreon, and others reacted by ‘no platforming’ (i.e. refusing services) known white supremacists account holders.

The event revealed a fissure across platform companies’ terms of service and their willingness to enforce them. Platform companies showed a commitment to ethical use by banning far-right and extremist accounts, which was debated in the media as a form of censorship. In this case, the actions by internet companies prompted a significant change in far-right organizing: the Alt-Right suddenly needed the support infrastructure of an ‘Alt-Tech’ movement. One of the organizers of the Charlottesville rally, Tim Gionet (aka Baked Alaska on social media) told the *LA Times*: “We’re getting banned from using payment-processing services, so we have no other choice. If that’s the gamble they want to take, I guess they can, and we’ll make our own infrastructure” (Pearce 2017). This question of *infrastructure* emerges for social movements in the face of particular obstacles, and Donovan (2018) argues that this infrastructural turn happens when a movement’s very survival is threatened.

Therefore, while no-platforming efforts have raised public awareness of online hate speech and racist organizing, they have also necessitated the development of alternative platforms to prolong the life of the movement. We argue that these so-called ‘Alt-Tech’ platforms also serve as recruitment and organizing sites for the far right, allowing for direct communication and continued engagement. All of which begs the question: what shifts in the sociotechnical organization of networked communication have enabled extremist communities to flourish? We take up this question by exploring how alternative sociotechnical systems have developed after the violence in Charlottesville.

In computer science, parallel ports were an early hardware solution for connecting peripherals, allowing for multiple streams of data to flow simultaneously. The concept of parallel ports as a type of forking (i.e. changes in the organizational flow of information to allow for processing different streams of data) is embedded within the design of technical systems and the open source movement (Kelty 2008). It is also an important frame for understanding the maturation of networked social movements as they are both structured by and structuring their own technological infrastructure (Donovan 2018). By porting the social

movement community from one platform to another, movement leaders are making decisions about what technological features are necessary to sustain the movement.

We use the figure of parallel ports here to analyze the development of alternative platforms. We ask: is the ‘forking’ of the Alt-Right’s technological development driven by a need for stabilization? Or, is it the case that the alternative technology developed in the wake of Charlottesville is something fundamentally different? In this article, we describe the development of a social media platform called Gab to show how technology was used by the Alt-Right to align with other online movements. While there are points of affinity where these movements have overlapped, we describe how the design and widespread adoption of Gab, a small online social media platform, rose in prominence after the riot in Charlottesville. Gab sought to bridge these movements not only to expand its user base but also because technology is a movement unto itself. Technological change is often intertwined with social movements learning to use the technology and innovating at the margins of utility (Mattoni 2013; Donovan 2016). As such, mapping technological change and the adoption of new technologies by social movements is a critical site for understanding sociotechnical systems designs and their challenges.

TACTICAL INNOVATION ACROSS THE ALT-RIGHT AND ALT-TECH

Doug McAdam (1983) explains the process of social movements’ development and decline through a theory of tactical innovation. In order to develop and to reach their goals, social movements must understand the broader political context in which they are positioned and devise tactics accordingly. Violent and disruptive tactics have a higher success rate than more institutionalized routes (Piven/Cloward 1991), but to achieve success these disruptive tactics must change often (McAdam 1983; Piven/Cloward 1991). The transformation of tactics either leads to legitimate power or the insurgents must develop new forms of disruptive protest (McAdam 1983).

In order to study social movements in this way, McAdam develops three concepts that emphasize the relationship between movements and counter-movements: tactical innovation, tactical adaptation, and tactical interaction. Tactical innovation refers to “the creativity of insurgents in

devising new tactical forms,” i.e. an initial action. Tactical adaptation is “the ability of opponents to neutralize these moves through effective tactical counter,” i.e. the responding action. Tactical interaction is the process through which these actions are understood and offset, much like a chess match (McAdam 1983: 736).

But, how does a social movement choose its tactics and decide on a course of action? The political opportunity structure is key to understanding how a movement’s chosen tactics are limited to the legitimate and illegitimate means available to meet a desired goal. Holly J. McCammon (2003) illustrates how political defeats, factionalism, and the limitation of particular resources led in some cases to tactical stasis and in other cases provided an impetus for tactical innovation. As well, a movement’s organizational readiness, its ability to mobilize resources and communicate tactics, often shapes what tactics they have in their repertoire.

Kim Voss and Rachel Sherman (2000), Melissa J. Wilde (2004), and Marshall Ganz (2000) have called attention to tactical innovation as it relates to the biography of a movement’s leaders. While some measure of charisma must always be present for leadership to be effective, successful leaders often have affiliations with other movements, coupled with strong alliances both inside and outside the movement, and the ability to innovate to reach their desired outcomes.

In the case of the Unite the Right rally, we see the field of political opportunities opened wide for white supremacists in the lead up to and following Trump’s 2016 election. Not only was the national media receptive to their messaging and dedicated a large amount of resources to covering their movement, but Jeff Sessions became the Attorney General, whose agenda was highly focused on other racialized issues, such as tracking the gang MS-13 across borders and labelling Black Lives Matter as ‘Black Identity Extremists.’ Within Charlottesville itself, the political gains of the Black Lives Matter movement included renaming Lee Park as Justice Park and removing the large statue of Robert E. Lee.

The Alt-Right, led by Richard Spencer and other charismatic figures popular on social media, chose Lee Park to stage the Unite the Right rally to protest the removal of the statue. This would also draw in counter-protesters who wanted to protect their earlier wins. Here, Spencer’s choice to rally in Charlottesville was a tactical innovation that sought to produce a confrontation with local activists in order to gain media attention. In May 2017, prior to the Unite the Right rally in August, Spencer and others

held a torch-lit protest in the same park. This protest got significant media coverage, despite the event itself being rather low-energy with only a few dozen people in attendance. By organizing events Spencer brought in new recruits and created alliances with new groups, mainly militias, who wanted to share the media attention.

Online recruitment for the Unite the Right rally depended largely on sharing digital fliers and memes. Spencer enrolled speakers from several other white supremacist organizations who raised funds so their members could attend. The mass rally was the most significant call to action across the US white supremacist movement in years. The organization of the event relied heavily on the belief that for the movement to grow and continue to influence politics, members had to show up in person. While communication about the event online occurred on every prominent social media platform, certain sites were key conduits of information, such as 8chan, discord chats, altright.com, and the Daily Stormer (a white nationalist message board) along with podcasts such as the Daily Shoah, Alt-Right Radio, and Youtube channels by Baked Alaska and others. The event itself was organized to bolster the leadership of several charismatic figures. The goal was to rebrand the image of the white nationalist movement as one with a youthful and rebellious vision. If they were too timid to face potential violence or could not afford to travel, others were asked to participate online.

The simultaneous use of multiple platform companies' products coupled with lesser known communication tools as their movement's infrastructure ensured that if one line of communication were shut down the event could still carry on. Online video streams from far-right public protests are often closely followed in discussion threads as they happen, so it was not surprising that when a major act of violence occurred in Charlottesville, online participants jumped at the opportunity to impact the course of events by manipulating media narratives in an attempt to get journalists to blame their political opponents.

For movements with their roots on the internet, it is imperative that tactical innovation occurs in real time, where offline events feed into online dialogues that shape a movement's followers' ability to communicate with one another. That is to say, infrastructure is integral to the socio-technical design of a movement like the Alt-Right. While charismatic leaders are instrumental in providing ideological frames and being spokespeople to the media, day-to-day participation in networked social movements

is largely monotonous. With few possibilities to meet in public without opposition, the Alt-Right has relied on creating an abundance of online media, forums, and opportunities for engagement that require internet infrastructure for the survival of their movement. As platforms began to remove far-right accounts and content, the Alt-Right adopted a developer's mindset and fashioned solutions out of existing code and resources. In the next section, we describe these steps taken by the Alt-Right to align with an Alt-Tech community in the wake of no platforming after Charlottesville.

TACTICAL INNOVATION AS A RESPONSE TO 'NO PLATFORMING'

The Unite the Right rally was a horrifically violent event. In the lead up to it, much of the online discussion revolved around open-carry permits, where some posted pictures of themselves posing with homemade weapons, handguns, and rifles. In some online forums and chat services, the coming event was described as a 'civil war' and 'battle with Antifa'. For those counter-organizing in Charlottesville, residents repeatedly attended City Council meetings asking for the permit to be revoked because there was going to be violence.

Emboldened by previous symbolic victories of harassment campaigns such as Gamergate (Losh 2017) and far-right intervention in the 2016 presidential election (Daniels 2018), leaders of the Alt-Right and other white nationalist groups openly promoted Unite the Right on public forums, anonymous imageboards, social media and Youtube. Gamergate was a large-scale online coalition of anonymous trolls, right wing pundits and social reactionaries who united to attack prominent women in the video game industry in 2014. For the Alt-Right, coordinated amplification of the call for many far-right factions to coalesce under a single banner would not have been possible without strategic use of public-facing media and simultaneous backchannel coordination and communication. The tactics for coordination owe much to Gamergate, relying on similar social and technical networks for organization and amplification (Losh 2017; Masanari 2015).

After the violence of Charlottesville, many platforms that took lighter approaches to content moderation were forced to confront the growing

threat of large-scale white supremacist organizing on their platforms. Symbolic targets, such as removing blue check marks on Twitter and the removal of Facebook pages, were chosen to give the impression that platforms were both willing and able to respond to this threat. Some, like Spencer, called for platforms to be regulated like other public utilities in the USA, where net neutrality applies to speeds afforded by internet service providers but not the content itself. In the USA, platforms are allowed to choke/censor/moderate content in the interest of the online community, which is key to market retention. In other countries, such as Germany, racist content is restricted by tighter government regulations, placing legal burden of removal on social media platforms and hosting sites. There are, however, easy technological circumvention techniques that allow for access, such as the use of the TOR browser or VPNs that mask location.

Others, in response, called for alternative platforms to arise and fill the communication and amplification void left by large-scale banning, or for right-wing operatives to double-down on pre-existing platforms with lax approaches to censorship or mission statements aligned with free-speech absolutism. This was a critical shift in the far-right's ability to stay organized as platform companies reacted to their violence. By shifting the focus from Alt-Right to Alt-Tech, a new wave of organizing continued online while offline events faltered or were completely overwhelmed by counter-protesters (Neuman 2017). One such influential platform, Gab, found its niche in the fall of 2017. While there were many other platforms competing for attention and users at this time – Voat, Bitchute, and Minds – Gab stood out as one that adopted a public stance on the issues of free speech, technological design, and white nationalism. We focused our study on the public communications of Gab founder, Andrew Torba, and analyzed the design of Gab to illustrate how the platform capitalized on this crisis within the far-right movement to simultaneously populate their platform and provide infrastructure to the floundering social movement.

During an interview with far-right media personality Alex Jones, Andrew Torba, founder of Gab.ai, encouraged the claim that, "This is a war we need to fight on Facebook, Google, Twitter everywhere – we gotta drive people to Gab.ai, to Infowars.com to Drudge Report."³ Gab is a small social media platform that combines elements of Twitter, Reddit and Face-

3 | Source: <https://www.youtube.com/watch?v=BmiXxPNy6N0>, 5:15.

book (Sovryn 2017). Launched in 2016, Gab saw a rise in users in late 2017, after a summer of far-right public actions across the US. Designed to supplement or replace the regular social media habits of its users, Gab's designers consolidated the features of larger platform services for a user base vocally dissatisfied with other social media services.

In the summer and fall of 2017, Gab positioned itself to take on users abandoning Twitter as a fork in three overlapping movements: the free speech movement, the open technology movement, and the Alt-Right. In the US, freedom of speech as a public value is commonly invoked as a defense of vile and vicious speech. This is how liberal and progressive groups, such as the American Civil Liberties Union, got caught up defending the rights of neo-Nazis in Charlottesville (Goldstein 2017). Instead of exclusively pushing far-right propaganda, Gab saw itself as a defender of vile speech and movement infrastructure; both a place for organizing and technological development. By asking not only for users to join, but also technologists, free speech fundamentalists, and far right provocateurs, Torba's Gab was bringing together different factions of online movements across parallel ports.

THE POLITICAL IDEOLOGY DRIVING ALT-TECH

Two days before the Unite the Right rally, Gab announced the 'Alt-Tech Alliance.' They wrote:

"The Free Speech Tech Alliance is a passionate group of brave engineers, product managers, investors and others who are tired of the status quo in the technology industry. We are the defenders of free speech, individual liberty, and truth."⁴

However, on August 17, 2017 after the fallout from Charlottesville, Gab was removed from the Apple play store because, as Apple told *Ars Technica*:

"In order to be on the Play Store, social networking apps need to demonstrate a sufficient level of moderation, including for content that encourages violence and

4 | Gab (2017): "Announcing the Free Speech Tech Alliance", 10 August 2017 (<https://medium.com/@getongab/announcing-the-alt-tech-alliance-18bebe89c60a>).

advocates hate against groups of people. This is a long-standing rule and clearly stated in our developer policies. Developers always have the opportunity to appeal a suspension and may have their apps reinstated if they've addressed the policy violations and are compliant with our Developer Program Policies" (quoted in Lee 2017).

Torba used this decision as an opportunity to raise capital using a crowd campaign and redoubled his efforts at recruitment (Kircher 2017).

In press and marketing campaigns for his platform, Torba pushes the bounds of platform accountability by calling out other social media platforms for censorship. Taking a stance of American-centric free speech absolutism, Torba and staff refuse to monitor or moderate hateful content, despite Gab's community guidelines strongly advising international users to adhere to their particular nation's speech laws.⁵ These policies create a haven for users banned from Youtube, Twitter, and Facebook. A lifelong conservative dissatisfied with his previous experiences in Silicon Valley startups, Torba has publicly embraced the controversy and began circulating white nationalist talking points in an attempt to draw in new users (Brustein 2017; Hess 2016).⁶ On Gab, Twitter, Youtube and Medium, Torba frequently aligns himself with conservative and far-right causes. Immediately following Charlottesville, Gab became an important hub for the far right, where they coordinated trolling brigades to attack journalists and others on Twitter. In a Medium post entitled *We Are At War For A Free And Open Internet*, Torba walked back his claims about his platform's positions on free speech and hate speech while publicly defending his decision to remove a notorious neo-nazi hacker, Weev, for violation of their domain registrar's terms of service.⁷ Asia Registry, the domain registry for Gab, threatened to take the site offline if they did not remove antisemitic

5 | For more information on Gab's Community Guidelines, see <https://gab.ai/about/guidelines>.

6 | Gab (2018): "EXPOSED: Anti-White 'Hate Speech' on Twitter By CNN, BuzzFeed, NYT, and LA Times Reporters", Medium (blog), 4 August 2018 (<https://medium.com/@getongab/exposed-anti-white-hate-speech-on-twitter-by-cnn-buzzfeed-nyt-and-la-times-reporters-fa72327e5010>).

7 | Gab (2017): "We Are At War For A Free And Open Internet", 4 September 2017 (<https://medium.com/@getongab/we-are-at-war-for-a-free-and-open-internet-426629fba4bf>).

posts by Weev (Hayden 2017). In an effort to reclaim their reputation, a new ‘censor-proof social media protocol’ IPO was launched to expand investment opportunities in the Gab ‘family’ of projects, and to keep Gab in the tech press.⁸

Gab’s marketing, as a centralized platform for the far right, relies on the fear of social isolation coupled with a willingness to involve the platform’s services in political debate. In 2017, emboldened by large-scale rallies in California, Tennessee, and Virginia, far-right groups escalated their ongoing attacks against both the mainstream media and racialized groups using targeted harassment on platforms. Known white supremacists operated openly on Twitter, with only the most violent content subject to removal. In response to public pressure and critical reporting on the continual harassment and spreading of extremist propaganda, Twitter issued an updated Hateful Content policy on December 18, 2017. Aimed at curbing hate speech and harassment, the policy would more aggressively ban users for violent and egregious behavior observed both on and off the platform. Twitter’s announcement regarding tighter control of hate speech on their platform was preemptively decried as a form of ‘censorship’ amongst far-right communities. For several weeks leading up to Twitter’s Terms of Service update, conservative and far-right networks employed the hashtag #TwitterPurge.

Gab has experienced difficulties raising funds as they are both unwilling and incapable of supporting or acquiring advertisers. Alt-Tech platforms, like Gab, are limited in their ability to interact with financial and advertising systems available to larger established platforms, like Twitter. On other platforms, advertisers threaten and withdraw support when it is discovered their marketing materials are paired with content promoting hate (Solon 2017). The influence of advertisers on a platform’s standards for monetization and hosting limits bad actors who seek a means of amplifying their messages. Alongside the inability to secure advertising revenue, Gab’s mobile app has been continually rejected from the Apple and Google mobile stores, limiting their audience. There are no third party applications that can work with Gab’s architecture, which is limited by a

8 | For more information on fundraising see: <https://www.startengine.com/gab-select>.

private and reportedly fragile API.⁹ We now turn to discussing the technological features of Gab to illustrate how the ability to consolidate so many of the features popular on other platforms, like Twitter, Youtube, Facebook, and Reddit, shows the promise of such tactical innovation to provide an all-in-one social media experience, but ultimately that the public uptake of a technology depends largely on the charisma of leadership and the values of its community of users.

THE TECHNOLOGICAL INFRASTRUCTURE SUPPORTING ALT-TECH

Gab became a central hub for the Alt-Right movement following the Unite the Right rally as Torba positioned his technology as the only unmoderated space online. Since then, Gab has continued to develop social movement community, integrating new features as Twitter, Facebook, and Youtube's Terms of Service pose problems for infrastructural stability. Keeping with their goal of being a one-stop community platform, Gab offers users an experience designed to recreate Twitter, Facebook, and Reddit in a 'censorship-free' environment – it mimics many functions of its main rival Twitter, the social connectivity of Facebook, and the news aggregation and voting system of Reddit. These are not merely inferences; Gab's creators and community posit the platform as a viable alternative for users unsatisfied (or permanently banned) from these major social media sites.¹⁰ Gab is therefore a prime example of how the greater Alt-Tech space integrates and modifies the pre-existing models of interaction their user base has come to expect from their social media experiences elsewhere. Here, Gab is not one platform among many, but is a hub that brings together many nodes – including white supremacist, misogynist, and 'free speech' communities – under the banner of Alt-Tech.

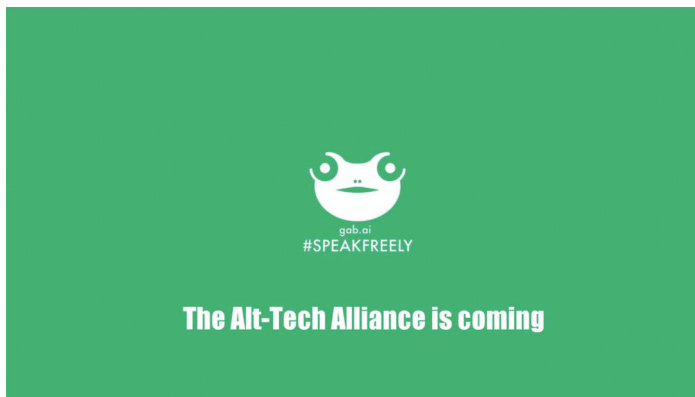
While largely replicating and consolidating features found elsewhere, Gab has a few unique tools or early innovations. Gab includes the ability to

9 | For more information on Gab's API: <https://dev.to/welcome/the-day-i-broke-gabai>

10 | Gab (2017): "Announcing the Free Speech Tech Alliance", 10 August 2017 (<https://medium.com/@getongab/announcing-the-alt-tech-alliance-18beb89c60a>).

filter keywords and followers, predating Twitter's ability to remove certain terms entirely from a feed, as well as muting individual users who may be engaged in harassment. However, Gab does not feature a block system on ideological grounds. The introduction of 'Pro memberships' expands dedicated users' power to control their experience, as well as introducing features to incentivize creators to use Gab as their primary broadcast platform.

Moreover, international news of white nationalists being banned from hosting services or detained while travelling has bolstered use of Gab in countries outside the US. As a result, Gab provides a place for discussion and coordination of translocal ideologies called 'networked nationalisms', "a belief that national borders are strengthened by the international cooperation of far-right politicians and 'Identitarian' movements to preserve the white race and culture" (Donovan et al. 2018). While 'strong borders' are often invoked by white nationalists in order to establish ties between Europe and the USA, the use of online platforms has digitized this rhetoric in the form of popular memes. These memes, such as the 'no more brother wars' series, propagate on Gab and help other users to identify with each other as a form of solidarity.



Alt-Tech Alliance. By DeviantArt user SwyTheQ.¹¹

11 | Source: <https://www.deviantart.com/swytheq/art/8-14-2017-The-Alt-Tech-Alliance-is-Coming-698733718>.

While being begrudgingly accepted by right-wing pundits, journalists, and content creators, Gab has yet to find its ‘cool’ among younger users. Gab’s logo itself is a transparent appropriation of Pepe, a cartoon frog meme associated with the culture of the image board 4chan, the Alt-Right and the online campaign for Donald Trump. Breitbart and Infowars writers have amplified hostile attitudes to major tech firms in their reporting, helping to bolster Gab’s reputation. Resultingly, Gab has become an echo chamber for the most disgusting content offered online, where antisemitism, misogyny, anti-LGBTQ, and racist epithets circulate exponentially. While technologically Gab can be glitchy and unstable, it has integrated some of the most popular features offered by other social media platforms. However, few journalists comment on the innovative incorporation of technological features because Torba’s public expressions of his political ideology overshadows every discussion of its design.

CONCLUSION

Our analysis shows that technology is not politically neutral. Instead, the leadership of the platform company, alongside the profile of the user base and the content they circulate have a significant impact on how platforms are perceived by the public. Gab provides a limit-case for analyzing how the Alt-Tech movement continues to be wedded to the values espoused by the developers. Instead of assessing the technology on the qualities of its design, its designers’ politics are built in and can alienate potential new users. By cloning features common to larger platforms and consolidating them into a single user experience, Gab’s platform is both political and infrastructural. In *The Politics of Platforms*, Tarleton Gillespie writes that platforms, “like the television networks and trade publishers before them, [...] are increasingly facing questions about their responsibilities: to their users, to key constituencies who depend on the public discourse they host, and to broader notions of the public interest” (Gillespie 2010: 348). He goes on: “Unlike Hollywood and the television networks, who could be painted as the big bad industries, online content seems an open world, where anyone can post, anything can be said” (ibid.: 353). The day has come where Youtube, Twitter, Facebook, Reddit, and Google have now become media giants, like Hollywood. As such, the social reckoning for platform corporations requires attention to key communities, audiences,

and public interests. Alt-Tech platforms, like Gab, now serve as a warning that without moderation policies, users will share noxious content, which becomes a liability for indexing quality and for promoting the platform's features. Moreover, all communities have rules, both online and off. Responsibility lies not only in the design, but in the enforcement of a platform's Terms of Service, much like a code of conduct.

And so, we return to our main question: is technological development within the Alt-Right driven by a need for stabilization? The answer here is: sometimes. While movement leaders, like Richard Spencer and Tim Gionet (Baked Alaska), understand why Gab is important for organizing a social movement community online, they also recognize the need for staying on more established platforms, like Youtube and Twitter. Both called for new regulation to make net neutrality a feature of platforms that allow for unmoderated sharing of user generated content. Critically, while Gab would stabilize the internal life of the movement, it would not be ideal for reaching out to new audiences, recruiting new members, and capturing media attention; all of which are central for prolonging the life of movements (Donovan 2018). For networked social movements, having a presence on all available platforms ensures stability when counter-movements tactically adapt and create obstacles, like in the event of 'no platforming.'

Is it the case that the alternative technology developed in the wake of the violence in Charlottesville is something fundamentally innovative? While we identified that Gab both clones and consolidates features from other platforms, it does not significantly change how online movements connect, collaborate, or organize. In fact, the engagement on this small platform has become so vitriolic that it may do more to destroy the alliances across these movements than to build them. While Torba's public proclamations heralded the platform as the only place online where speech goes unmoderated, he had to remove some racist posts because online infrastructure does not stand outside of the information ecosystem. Pressure to change one's platform can come from the public, journalists, or from other infrastructure companies. No single user or platform can act in isolation given the architecture of the internet. That is to say, while platforms may be organized as parallel ports, which can function independently of one another, they must be plugged into other internet services such as service providers, domain registrars, and cloud services. As a result, the terms of service for companies that are deep in the stack may become the ultimate arbiters of what content gets to stay online.

In conclusion, because hundreds of movements coexist online and use internet infrastructure to recruit and get organized, the charisma of movement leaders and the political values of the movement will determine how their social movement community tactically innovates both online and offline. The violence in Charlottesville both gained the Alt-Right widespread media attention, but also propelled online companies to ‘no platform’ white nationalists. The use of violence by social movements often has similar effects, whereby movements that resort to violence often become heavily surveilled by formal authorities, such as the police. However, in this case, sanctions came from platform companies who were implicated in the communication and coordination of the Alt-Right, which suggests that technology makers are a movement unto themselves. As such, the burgeoning Alt-Tech movement as well as the online free speech movement will have to choose their political alliances more carefully if they are to succeed in recruiting and retaining members that do not also support far right perspectives. Platforms, as sociotechnical infrastructure, will adapt to new forms and norms of conduct, but the values that support design must also support a diversity of tactics and users.

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