The Technologization of News Acts in Networked News Participation: LGBT Self-Media in China

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The technologization of news acts refers to the applications of technologies in journalism and the functional and infrastructural roles technological actors, such as Web designers and coders, may play in these applications. This conceptual article explores how technology facilitates news acts as forms of civic participation, particularly through citizen-oriented journalistic practices. Recognizing emerging scholarship examining news participation, this article argues for situating journalism within the networked news ecology. Drawing on an example—self-media production by LGBT communities in Mainland China—we explore a framework (1) conceptualizing peripheral actors' roles in journalism, (2) theorizing power dynamics driving the broader news ecology, and (3) accounting for political-economic and sociocultural contexts specific to localities. This article argues that the technologization of news acts presents a networked power structure within which peripheral actors are situated and of which they negotiate. Technological infrastructures are thus a pivot to connect contextual factors with networked news participation and reveal the dialectical power relations warranting an information elite in the news ecology.

Keywords: civic participation, LGBT activism, network technology, news acts, peripheral journalism

The digitization of news has disrupted the authoritative control of professional journalists in the news ecology and opened the profession to various social actors including bloggers, social media commentators, coders, and Web analytics managers (see Ahva, 2017; Robinson & Wang, 2018). Using publication platforms, social media, and other technologies, these actors provide news tips, create news content, comment on and share news reports, create Web analytics and metrics, and thus contribute to

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reshaping journalistic practices. Working beyond the boundaries of professional journalism, civic participation and technological intervention constitute a periphery of news production that collaborates, competes, and sometimes collides with the professional logics of journalism (see Eldridge, 2018). Even within legacy news organizations, reporters and editors produce news content, but audience engagement analysts, technologists, engineers, marketers, algorithms and automated systems, and other newsroom staff also contribute to the production process. Collectively, these social actors contribute to the production and engagement of news, enacting "peripheral journalism," in which actors not self-identified as journalists contribute to news production and dissemination (Holton & Belair-Gagnon, 2018). To better understand the mechanisms of peripheral journalism, a framework that accounts for news acts and the networked structure of news participation is necessary. Such a framework provides a foundation for theorizing the technologization of news acts and its impact on journalism as a fluid profession.

News acts—"sharing, commenting, and other kinds of active exchange of information" (Robinson, 2014, p. 511)—go beyond the circulation of issue-specific information and contribute to citizens' identification with local communities and engagement in broader civic acts. That is, news acts are both informational and communal. Professional journalism and citizen participation form a continuum of social actors who interact with one another collaboratively or competitively to have their voices amplified. News acts account for the convergence of news production by institutional and noninstitutional social actors. According to Robinson (2014), news production and consumption collectively constitute a civic act in which citizens actively participate in directing the information flow and engage in community building. This article thus lays the foundation for theorizing how technology reconstitutes the relationships among social actors, traditional and emergent, in the news ecology. This article conceptualizes the "technologization of news acts" in two dimensions: (1) technologies become an integral part of the civic function of news and (2) technologies constitute the infrastructure for news acts that stipulate certain political economic dynamics and power relations.

Digital technologies do not transform news acts into a freestyle game without rules. As Robinson and Wang (2018) argue, participation in news acts is networked at different system levels, and the enactment of various journalistic roles is conditioned by a social actor's positionality within the news ecology. Robinson and Wang further argue that although the capacity of peripheral actors to direct information flows has been enhanced by digital technologies, the power relations in a given news ecology still tend to be dominated by an "information elite" who occupy the most advantageous position and possess rich resources. For example, despite mobilization of grassroots networks, the recent wave of the #MeToo Movement still privileged the voices of White, cisgender, and heterosexual women with a higher social status (see Leung & Williams, 2019). The technologization of news acts entails two pulls: open participation and centralized domination.

This article builds on an existing academic conversation on news acts as a form of civic participation and proposes a framework that situates "peripheral" journalism within the networked news ecology. This framework adds to existing literature by providing (1) a conceptualization of noninstitutional actors' participation in journalism; (2) a systematic theorization of the power dynamics driving the information flow in the broader news ecology; (3) and a consideration of political-economic and sociocultural contexts.

This article argues that the technologization of news acts presents a networked power structure within which peripheral journalistic actors are situated. On the one hand, peripheral actors can use digital

technologies to enact journalistic roles and navigate the power dynamics of the news ecology. On the other hand, digital technologies serve as an infrastructure that affords and constrains the ways peripheral journalism is enacted at the regional, national, and global levels. Indeed, news acts vary by the particular sociocultural understanding of journalism and the political economy of news production in each locality.

Using an example, the news ecology of LGBT (lesbian, gay, bisexual, and transgender)[1] self-media in China, this article proposes that technological infrastructures are a pivot to connect news acts with local contextual factors like regulatory system and platform ownership. News acts are simultaneously advanced and constrained by the power relations an information elite stipulates in the networked news participation. The power relations driving the technologization of news acts are not absolute, but dialectical. The domination of information elites in the news ecology is not repression in fixation, but is faced with resistance and contestation. Networked participation in news acts subjects the digitized information flow in the news ecology to a constant repositioning of actors bidding for the information elite status. The example of Chinese LGBT self-media is illustrative of the conceptual framework we build in this article, as the primary social actors engage in peripheral journalism through network technologies and must navigate through intertwined power relations specific to the local media system.

Conceptual Framework

Technologization and News Actors

The technologization of news acts refers to the application of technologies in journalism and the functional and infrastructural roles of technological actors in news acts. This works through a convergent matrix composed of social actors, technologies, and audiences (see Lewis & Westlund, 2015). These actors contribute to news acts besides institutional news organizations and professional journalists, directing the information flow from multiple fronts at the periphery and reshaping the institutional core of news ecology. The participation of peripheral actors in news acts presents a networked dynamic of power that shapes the digital news ecology (see Anderson, 2016; Wiard, 2019). The interactions in a news ecology are not, however, free-floating and should not be interpreted as the result of a natural order (Nadler, 2019).

"Networked news participation" addresses this by accounting for both the symbiotic or competitive relationships among news actors and the structural forces constraining those relationships (Robinson & Wang, 2018). This model entails three core claims (see Robinson, 2018; Robinson & Wang, 2018). First, social actors participating in news acts can be categorized by their roles and positions in the news ecology into institutional producers, individual institutional producers, alternative sites, network facilitators, community bridges, niche networkers, and issue amplifiers. Second, these roles are enacted through networks at different system levels from micro, meso, to macro, and media platforms materialize the network connections within and across levels. Third, the enactment of roles and the formation of networks are subject to hierarchical power structures of cultural, political, and economic institutions that materially

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[1] The acronym LGBT is applied in this article as it reflects the communities the analysis of the example covers. Other minorities like intersexes and gender queers are not represented in this article. In China, the visibility of sexual minorities concentrates on lesbian, gay, bisexual, and trans people.

support and regulate the news ecology. Therefore, news participation in the digital age is networked in an ecological manner, but the shape and utility of news networks come with caveats concerning structural forces. The technologization of news acts has deep implications for the labor dynamics of news production (see Robinson, 2011) and the economy of news distribution (see Ashuri, 2016; Kleis Nielsen & Ganter, 2018), redefining the role of audience and subjecting institutional news organizations to revenue competition against technology companies.

Technology is treated as agentive in the interplay with journalists, managers, and technologists rather than being passively used by human actors. Indeed, "technology is not static, our relationship to technology is not fixed, and the social processes emerged in and through our interactions with devices are subject to ongoing negotiation" (Lewis, Guzman, & Schmidt, 2019, p. 14). For example, for professional journalists, mobile chat applications allow for more private settings function as "extensions of newsrooms" that situate news gathering within hybrid physical–virtual spaces and interactive connections with colleagues, sources, and audiences (Belair-Gagnon, Agur, & Frisch, 2017). The inclusion of emerging technologies in news acts also engenders convergence and contestation of different professional cultures and epistemologies. Besides the adoption of new technologies in newsrooms, the technologization of news acts resides in journalists' collaboration with technologically oriented peripheral actors who may not consider themselves journalists (see Belair-Gagnon & Holton, 2018, on Web analytical companies; Lewis & Usher, 2014, on Hack/Hackers).

Technologization and Information Infrastructure

Technologization also means that technologies constitute the material infrastructure for communication, and various social interests are entrenched in the design of technological infrastructure. The technical configuration of technology determines functionality and sets up a range of institutional frameworks that are more compatible with a given technology (Hughes, 1987; Winner, 1980). Technology engages with infrastructural politics because it embodies some values and practices while dismissing others, prioritizes certain perspectives while marginalizing others, and includes certain groups of people while excluding others (Harbers, 2005). As pointed out by Innis (1951), communication technologies constitute the infrastructure for information flow, knowledge production, and civic participation, and often "bias" toward certain forms of power relationships. From the printing press to social media and artificial intelligence, journalism has been operating with technological infrastructures that increasingly embody the hybridity of media (see Chadwick, 2013).

Given this infrastructural view of the technology, the conditions of technologized news acts mean that despite the networked structure of news participation in the digital age, power is not exerted by any willing social actor from whatever position in the news ecology. As the digital platforms constituting the infrastructure for networked news participation become corporatized and commercialized, structural limitations for peripheral actors emerged about the political economy of proprietary platforms (Usher, 2017). Algorithms designed to maximize profitability and the quantification and commodification of the social capital generated through civic participation determine what content goes viral and which user group is influential on proprietary platforms (Gillespie, 2018).

Such infrastructural designs privilege an "information elite," which refers to social actors positioned to benefit disproportionately from the advancement of information technology. Whether working within or outside of the news ecology, these information elites use different digital platforms, have direct access to decision makers and a large audience because of their affiliation with established institutions, and hence have a stronger capacity to coordinate resources from multiple networks to amplify their voices and have their voices heard (Robinson & Wang, 2018). This group may be insiders or close affiliates of the booming technology industry, who elevate their social status through professionalization and mass-marketization of networking technologies (see Marwick, 2013) and expand their influence to other fields like political campaigns (see Kreiss & McGregor, 2018). State influence should also be factored into the enfranchisement of information elite through infrastructural designs. Actors conducting state commissions (e.g., see Gu, 2014, about Chinese government's use of microblogging on Weibo) or propagating state-sanctioned ideologies (e.g., see Marwick & Lewis, 2017, about the digital spread of right-wing ideologies in the United States) are easier to have their message amplified because the institutional core of news ecology is more inclined to afford them access to technologies and allocate additional resources to them.

To identify an information elite does not deny the possibility that grassroots voices can gain dominance in the news ecology through networked participation. The critical implication of the information elite argument is that some actors are better positioned in the news ecology to achieve the elite status, while this undue privilege can potentially deter peripheral actors with disfranchised backgrounds from meaningful participation. Wang (2018) documented an example of fringe political groups bidding for the status of information elite in the Hong Kong localist movement, where localist activists and alternative media producers successfully carved out a niche in the news ecology dominated by proestablishment sources. The technological infrastructure thus plays a central role in the emergence of the information elite. Social factors, such as the decline of socioeconomic mobility, concentration of media ownership, and the shifting center of civic life away from institutional politics, configure the interaction between news actors and the information infrastructure.

In sum, the technologization of news acts delineates how technology functionally and infrastructurally affects social actors' networked participation in the news ecology. In this conceptualization, institutional news organizations no longer constitute the monolithic proxy for news production and distribution; noninstitutional actors occupy different ecological positions and play a spectrum of roles in disseminating news and creating community networks. In technologized news acts, power manifests dialectically through the dominance of information elites and the emergence of niche resistance. Technology contributes to power relations embedded in the interactions among social actors in the news ecology, facilitating both the transformation and the reproduction of those power relations. The design of technological infrastructure reflects political economic and sociocultural conditions of a given locality. Analysis of technologization hence connects news acts to their social contexts.

Application of Framework to Chinese News Ecology

To illustrate how technologization of news acts works in networked news participation, this article examines the LGBT news ecology in Mainland China. In this example, we look at processes at work in a specific national context where the development of self-media gives opportunities for fringe voices representing sexual minorities to navigate a restrictive news ecology and create social change. As a conceptual framework, the

technologization of news acts promotes the flexibility to examine the interplay between digital technology and news acts in cases with varying ecological contexts. The remaining sections of the article provide insights into how the conceptual framework can be applied to particular research problems.

The example of LGBT-focused news participation in China follows networked structures specific to the locality's media system. Theorization of news participation from the perspective of technologization should not universalize a digital infrastructure for news production. Structural conditions vary by countries and regions (see Dobek-Ostrowska, 2010; Hallin & Mancini, 2012). Peripheral journalism, as part of the broader news ecology, is also affected by these locality-specific factors. In China, news media are state owned and heavily censored despite reforms to commercialize and marketize the media industry (see Frisch, Belair-Gagnon, & Agur, 2018; Zhao, 2011). Even digital platforms that are equivalent to Facebook or Twitter in the West, such as WeChat and Weibo, conduct rigorous self-censorship to maintain an amicable relationship with political authorities. Given this context, professional journalists in China would need to step out of their institutional affiliation to perform the watchdog role of journalism with more flexibility from the periphery (see Luo & Harrison, 2019; Xu, 2015). Meanwhile, the ability of citizens to amplify their voices on social media is sensitive to policy changes, technology accessibility, and platform rules (see Luqiu, 2017; Rauchfleisch & Schäfer, 2015; Svensson, 2014).

However, the centralized control of media, primarily by the Chinese government and big corporations, does not eliminate the civic function of news acts to raise awareness of social issues and facilitate community effort to combat those issues. Journalists and other social actors collectively direct the information flow between the state and the public in relatively restricted ways. For example, Reese (2015) observed how a mediated space emerged out of the transnational civil society through the collaboration between environmentalist organizations and journalists in China. By emphasizing solving local problems and improving governmental apparatus, social actors can renegotiate and even surmount the restrictions imposed by political authorities. This case demonstrated both the potentials and limitations of networked participation to facilitate public discussion of social justice issues and check against power abuse in the Chinese news ecology.

To reconstruct the news ecology of LGBT-related content in China, we used evidence collected with two methods. First, we consulted primary, secondary, and tertiary sources including news articles, policy documents, academic literature, organizational records, website entries, and content posted on microblogging and vlogging platforms. We selected these sources based on their impact on the Chinese LGBT community. Second, the first author of this article conducted field observation, including in-depth interviews and participant observation, of LGBT community organizations and niche media in Beijing during June and July, 2019.[2] The author selected summer months for the fieldwork because that was when pride

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[2] This fieldwork is part of a multisite case study of LGBT news ecology by the first author. The Chinese part of ethnographic data includes 14 sessions of in-depth interviews with seven LGBT activists/organizers and nine other community members; there are also data from 20 hours of participant observation at four community events. Organizations and groups involved in this project include: Beijing LGBT Center, Beijing Queer Chorus, Common Language, Beijing Lala Salon, PFLAG China, *Gay Spot*, Lovers Project, Destination Diverse Cultural Center, and Gayglers Beijing. The project receives funding support from the Institute for

season peaked and many LGBT campaigns and events took place. Despite being limited to one city, the fieldwork informed the scope of material selection mentioned in the first method broadly, as many informants were centrally located at the national LGBT advocacy network.

As in Reese's (2015) essay theorizing mediated spaces and Nah and Chung's (2016) essay theorizing communicative action in citizen journalism, empirical examples are constructive for theory building. Through the presentation of evidence in the next section, we will use LGBT news ecology in China as a case to show how technologization of news acts works in a specific context. The empirical analysis in the following sections is informed by the ethnographic work done by the first author, and informants and interviewees direct us to some of the sources to be presented.

LGBT News Acts and Self-Media in China

Context of Chinese LGBT Communities

Despite censorship of LGBT topics, China has vibrant LGBT communities in its urban centers such as Beijing, Shanghai, and Guangzhou (see United Nations Development Programme, 2014). As the capital city, Beijing is the base for several prominent LGBT organizations and businesses. For example, the Beijing LGBT Center is one of the largest organizations in China serving sexual and gender minorities. It advocates for LGBT rights, organizes community events, provides counseling, and produces research reports and media content. Destination, located at the city center of Beijing, was one of the first gay-friendly bars in China when it was founded in 2004. The bar attracts international guests to join its event line-ups and hosts an LGBT cultural center. There are also LGBT hobby groups in these cities. For example, Beijing Queer Chorus and Shanghai Hyperbolic Singers are two choruses having more than 100 LGBT-identified or ally members each.

The Chinese government no longer overtly prosecutes people for being gay, but LGBT rights are deliberately left unrecognized in policies and laws (see United Nations Development Programme, 2016a). A person cannot legally marry a same-sex partner and a man cannot be charged with sexual assault on another man. In an official statement made in front of the United Nations, the Chinese government allegedly provided equal health care and other social welfare to LGBT people, but it was implied that formal recognition of LGBT rights would violate the "historical cultural value" of the country (Liu, 2018). Nevertheless, local officials on the ground can proscribe gatherings with LGBT themes and use police force on LGBT groups (see "Activism Crackdown," 2019).

As a result, the lack of visibility is a de facto condition LGBT communities face in the news ecology. LGBT communities are represented in mainstream media only to a limited extent. As part of the 2019 Shanghai Pride Festival, the China Rainbow Media Awards were presented to media outlets that contributed to fair and in-depth news coverage of LGBT issues. According to a report by Peng and Yang (2019) for the

Regional and International Studies at the University of Wisconsin-Madison. Because our purpose is to offer a systematic overview of the Chinese LGBT news ecology and ground the theoretical framework we are proposing, specific evidence from the ethnographic data is not extensively presented in this article.

award committee, there were less than 800 LGBT-related news reports published by Chinese media in 2018, and only 14% of the reports were by traditional media like newspapers and magazines.

Most LGBT coverage was produced by peripheral actors (mainly advocacy groups and some digital-only news sources) outside of institutional news organizations. Because the mainstream media are restricted in covering relevant issues, such as workplace discrimination and police violence against LGBT people, peripheral actors play a central role in disseminating news and cultivating social ties among LGBT communities. These actors come from different backgrounds and use digital platforms to engage in various forms of self-media publishing, like blogging, microblogging, and vlogging.

Networked LGBT Self-Media

Self-media, meaning that individuals and organizations broadcast their views using platform services, are the most influential type of media source in the LGBT news ecology.[3] Almost all Chinese LGBT organizations have self-media channels on proprietary platforms, such as Weibo and WeChat. These organizations use those channels to publish original content, curate information from other sources, and publicize campaigns and events. For example, the Beijing LGBT Center has a Weibo account with more than 20,000 followers. The most common type of posts, tagged with "gay rights movement online," aggregate and translate LGBT news from international sources. These posts ensure continuous content output to maintain the center's baseline presence on Weibo. As exposure to news takes place via mobile apps and social networks, maintaining such accounts enables LGBT organizations to push their causes onto people's multiple screens and actively participate in the technologized news acts within and beyond LGBT communities.

The Beijing LGBT Center also used its Weibo account to publicize special campaigns and events. For example, as part of the "My Summer With Trans" campaign, launched in 2019, the center interviewed trans people in China and edited the interviews into Weibo posts. These posts, featuring short videos and still pictures of the interviewees, told stories of trans people from diverse backgrounds. The center also used their Weibo account to publicize the localized version of Spirit Day, which was dedicated to stopping bullying against LGBT teenagers. This cross-platform collaborative effort by pro-LGBT organizations had a central objective to make homophobic and transphobic bullying visible through individual stories. The visual element of purple, the assigned color for Spirit Day, made the campaign attention-grabbing on social media. The Beijing LGBT Center released two sets of purple flyers with infographics and slogans on Weibo and encouraged Weibo users to apply a purple filter to their profile picture on the day. These self-media campaigns, operated by actors adding to mainstream journalists, constitute news acts that create the common ground for LGBT communities to express their identities and articulate their interests in social issues.

Other forms of LGBT outlets are native to social media. For example, the nonprofit VCLGBT (Voice of Chinese LGBT), a "micromagazine" launched in 2009 on Weibo, published more than 13,000 unique posts and became the national hub of LGBT information about health, culture, community events, and familial and

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[3] "Self-media (自媒体)" is the more popular term referring to citizen media or participatory media in China. This term highlights the vision to produce original content to a broad audience besides merely opening a public account on social media.

intimate relationships (e.g., see Wang & Wang, 2019, for VCLGBT's response to film censorship). VCLGBT has more than 1.5 million followers on Weibo. In April 2018, VCLGBT posted a statement of termination, citing "uncontrollable reasons" that implied pressure from either the platform or other authorities. During this time, Weibo implemented a platform policy to censor all gay comics and videos, and LGBT accounts owners were pressured by the platform to downplay LGBT-related content. As an iconic outlet for the LGBT community, VCLGBT's statement prompted a surge of discussion under the topics "#I am gay (#我是同性恋)" and "#I am friend of gay (#我是同性恋的朋友)." These two topics reached 24 million views in less than 15 hours, and Weibo banned these discussions promptly (Chen, 2018). In addition to Weibo, where publishing targets the larger public, VCLGBT operates an official WeChat account[4] with an emphasis on community service. Subscribers of this account receive regular updates and featured articles from VCLGBT. They can also apply to volunteer, donate to the organization, and report homophobic speech on the Internet. The account hosts two live chatting channels: one for suicide intervention, and one for general inquiries. These publications and services facilitated by the technologization of news acts enable digital-native actors to extend their influence beyond niche networks online and accumulate support among the general public.

Further at the periphery are individuals who are not activists or full-time media producers, but remain active on various platforms sharing LGBT content or documenting their LGBT life. This is a diverse group of self-media producers, including celebrities, online influencers, couple vloggers, and other ordinary people identified as LGBT or ally. For example, "Mister Piaoquan (票圈君)," a gay Weibo personality with 1.1 million followers, frequently expresses his opinion on LGBT issues and posts about other civil-rights-related topics, including feminism and free speech. On Weibo, a lesbian with the account name "Nengdayu (能大宇)" published a video series documenting the older generation's perception of LGBT people in different Chinese cities.

Other self-media producers may not be consistently devoted to LGBT visibility as a social issue, but their lifestyle blogs, relationship diaries, and occasional comments on current affairs cultivate grassroots connections to the broader LGBT communities. For example, "Daxiong Wanting to Be a Comedian (想做谐星的大雄)" is a popular gay vlogger on Bilibili, the biggest Chinese video publishing and streaming platform. Bilibili is one of the most LGBT-friendly platforms in China due to its root in fandom cultures. On this platform, there are many gay and lesbian vloggers including Daxiong. LGBT Bilibiliers post videos of traveling with their partners, trying out new restaurants, and other moments in their lives. "Goodnight Jiubi (晚安九笔)," a self-media producer based on both Weibo and Bilibili, produces videos about feelings and relationships among gay men. He also operates an online radio channel on the same topics. One of the most popular episodes explores the ambiguous line between being friends and being lovers.

In sum, self-media fill the gap left by institutional Chinese media producers, and a cross-platform news network is established to serve both informational and civic purposes. That is, LGBT individuals and organizations not only access and circulate news concerning their communities through self-media channels but also use self-media to connect their life and work with broader causes of equality and inclusivity. In the

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[4] An official WeChat account is a type of public account different from regular individual accounts. An official account has many functions and resembles a mini-website.

digital age, the convergence between civic and personal interests through alternative media production is a key feature of news acts (see Wang, 2018). In this networked LGBT news ecology, peripheral actors use digital technologies to facilitate networks, amplify issues, and bridge between sexual minorities and the general public. Networked news participation affords Chinese LGBT communities to challenge the official narrative and mainstream news frames of sexual minorities and circulate self-produced media content on alternative platforms (Shaw & Zhang, 2017; Yang, 2019). The technologization of news acts destabilizes the dominance of institutional actors in the news ecology, and a group of LGBT self-media producers manage to elevate themselves to the status of information elite through digital publishing savvy and well-connected social networks. These producers attain large audiences, serve as the opinion leaders within the LGBT niche network, and become influential in the overall news ecology.

Conditioned LGBT Visibility

LGBT individuals and organizations can bypass professional journalists to technologize news acts from bottom up and create visibility for LGBT people in the news ecology. An example of this was an incident on May 17, 2018, the International Day against Homophobia, Transphobia, and Biphobia. The Chinese state media were silent on reporting the many events held at various locations across the country to raise awareness of discrimination against LGBT people around that day. Yet LGBT organizations ran campaigns on their self-media channels to initiate a public discussion. Weibo personality Mister Piaoquan invited his followers to join him and hand out rainbow badges at 798 Art Zone, an estate housing many art studios in Beijing. On the day of the event, security guards were instructed[5] to prevent campaigners wearing rainbow badges from entering the estate, and during the confrontation, a guard hit and pushed an activist. This altercation was captured on camera, and users quickly circulated the video clip through the network of LGBT self-media. Although Weibo immediately deleted the original video clip and related posts, dozens of self-media producers participated to raise awareness to this incident and prompted follow-up campaigns responding to the social hostility toward LGBT people in public spaces.

The LGBT visibility promoted by technologized news acts relies greatly on proprietary platforms that provide technological services, particularly microblogging, video sharing, and streaming. This technological infrastructure entrenches the constraints political and economic powers impose on LGBT news acts. The biggest constraint is political censorship, meaning that the Chinese government views LGBT activism and other forms of civil rights advocacy as politically risky speech to be censored. Incidentally, the government strictly regulates media depicting LGBT scenes. In 2017, the state agency for media regulation released an online-media censorship code, which listed homosexuality as a theme to be censored under the category of "obscene and vulgar content" (for the original document, see China Netcasting Services Association, 2017). This stigmatization of sexual minorities is accompanied by tight control over LGBT activism. In 2016, China passed the Charity Law, which implemented a stringent registration system and prohibits unregistered nonprofit organizations from obtaining public funding (for details about the law, see United Nations Development Programme, 2016b). In this context, a legal status would be granted solely to organizations conforming to the political agenda of the government, and most LGBT organizations fall outside of that category.

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[5] Local police agencies were likely to be involved, but there was no definite evidence.

Chinese technology companies, including established conglomerates such as Tencent and Baidu, as well as startups such as ByteDance, need to conform to governmental authorities for their existence. The Chinese government can use its administrative power to terminate the service of a platform or remove the platform's application from distributors including Apple App Store and Google Play. For example, the Chinese government temporarily banned Zhihu, a Quora-like question-and-answer platform, because it had hosted discussions of sensitive political topics a few days before a vote to allow unlimited tenure for the president (see Chan, 2018). In 2019, the government discontinued Qdaily, a multimedia news website with its own mobile app, for three months after the discussion of several high-profile cases of investigative reporting including the expulsion of "low-end population" from Beijing on the platform (see Hernández, 2019). The relationship between platform companies and the Chinese government is symbiotic. While the Chinese government plays a central role in regulating corporate access to the market, technology companies in return actively conform to the government's agenda to maintain legitimacy domestically and expand its global influence (Keane & Yu, 2019; MacKinnon, 2011).

Because of this reliant relationship with the government, Chinese proprietary platforms self-censor content they deem sensitive and invest in developing monitoring technologies. Once LGBT issues are associated with civil rights, they become targets for censorship. For example, during the 2018 Weibo ban of LGBT content, the platform discontinued the super topic[6] "gay," and censored all content containing gay-related keywords. Although the ban was reversed because of strong pushback from Weibo users, many LGBT accounts' ability to self-publish on Weibo was still curtailed by continued monitoring from the platform and frequent deletion of posts. Even on WeChat, where most content is shared among individual users or closed groups, all these private conversations are recorded and monitored backstage by the platform, and public-facing accounts and large chat groups are also target for platform censorship (see Harwit, 2017; Tu, 2016). As a result, platform technology facilitates the digital network of LGBT news acts, but it subjects the whole network to comprehensive surveillance indirectly sanctioned by the state, notably through self-censorship and keyword monitoring.

Posterior censorship is accompanied by access control, meaning that not all self-media producers have an equal chance to gain visibility in the news ecology. The low cost of publishing associated with self-media technologies allows peripheral journalistic actors to put their perspective out in the public domain. However, the chance to be heard is unevenly distributed. On proprietary platforms, algorithms set the basic parameters for information flow, and promotion features prioritize a selective group of users who can attract enormous traffic to the platform. The Chinese microblog sphere is dominated by the "big Vs," whose elevated status among platform users positioned them as nexuses of information flow (Huang & Sun, 2014; Wang, She, & Chen, 2014). The stratification of users disadvantage LGBT self-media producers in general, as most of them do not have broad social recognition outside of the LGBT niche network. For individual producers, it is important to avoid branding their content as overtly LGBT-related and reframe it with other keywords that are more likely to be picked up by the platform algorithm.

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[6] A "super topic" on Weibo is a public page where all subscribing users can post. It functions like a subreddit channel. A community of users would share and discuss news and other content about a specific topic on the channel, while other users can also search and view the channel discussion.

In sum, the technologization of LGBT news acts in China also means that the infrastructure of technological platforms confines self-media producers to the restrictions set up for political and economic purposes. According to Hong and Xu (2019), instead of a simplistic model of authoritarian control, proprietary platforms in China are governed under a fragmented framework embodying competing interests of the government, the business sector, and transnational judicial and administrative bodies. That is, the prohibitive designs of proprietary platforms are intentionally implemented to balance the civic need of networked news participation and the interest of the status quo to maximize their influence in the public domain. LGBT organizations and outlets experienced "bombing"[7] of their Weibo accounts, meaning the banning of an account without going through any standard procedures. The platform would not inform the user of any reasons or give any warning in advance when the account posts politically sensitive content. On WeChat, the service may still appear normal for a censored user, but everything the user posts is removed from public view. And a WeChat group can be forcibly disbanded if the frequency of sensitive keywords is high in that group.

In response to these restrictions, LGBT self-media producers must choose between upscaling their renown (which means a higher likelihood of censorship) and preserving the privacy of their niche networks (which impedes the capacity to reach out to the broader community). It is also easier for apolitical topics, such as lifestyle, relationship, and celebrity culture, to survive censorship, while algorithm and human censors often detect and promptly delete content referring to public affairs. LGBT self-media producers sometimes need to operate multiple accounts as back-ups, which further reduces the chance to be amplified by platform algorithms. This dilemma demonstrates how technological infrastructure channels power relations into news acts in the process of technologization. LGBT self-media producers, as the emergent information elite within a niche network, face vigorous resistance from institutional information elites who occupy the core of news ecology. The political interest of the state to contain civil rights advocacy and the commercial interest of technology corporations are interlocked through the design of technological infrastructure, undermining the ability of marginalized communities to amplify their voices in the news ecology.

Discussion and Conclusion

This article conceptualizes the technologization of news acts and the power dynamics driving the information flow in the news ecology using the example of China's LGBT self-media production. This case demonstrates how the information flow of LGBT news is situated within the Chinese news ecology, how a network of social actors uses self-media production to reroute LGBT visibility past institutional journalism, and how the news acts around LGBT visibility are simultaneously facilitated and constrained by the technological infrastructure of proprietary platforms. This section will discuss two specific implications—the ecological view of news participation and the dialectical view of power relations—and how the framework contributes to communication studies broadly.

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[7] The term "account bombing (炸号)" is a vernacular expression used by self-media producers in China. Our informants from LGBT organizations used this term to talk about their experience with social media censorship. Users whose accounts are bombed lose all previous content and are denied access to any function the platform provides, including posting, sharing, and commenting.

Technological infrastructure and social actors are ecologically connected in news acts. The communicative infrastructure of digital technology consists of social institutions supporting and regulating the technologization of news acts (see Ananny, 2019). Structural constraints specific to a given news ecology do not go away in digital communication; technology can reproduce or even reinforce those constraints. The two conditions of technologization are complementary to each other. The functional condition reveals how social actors actively adopt technologies in news acts, while the infrastructural condition reveals how technologies channel power structures of social institutions. Chinese LGBT self-media producers are ecologically positioned to be both empowered through niche networks and burdened with infrastructural marginalization. Shifting relationships and constant interactions among social actors make any position in the news ecology contested, in motion, and ready to change (see Anderson, 2016, on the rhizomatic view of news ecology).

As a result, power relations shaping the technologization of news acts are dynamic and dialectical. Power, instead of being entirely repressive, can also be productive through acts of domination and resistance. Networked news participation shows how technologies can both strengthen existing power relations and function as a vehicle to generate new power relations. As news acts are technologized, multiple cores are located at different nodes of an expansive civic network, while interlopers from the peripheries traverse the network and constantly reposition themselves (see Belair-Gagnon, Holton & Westlund, 2019; Eldridge, 2018). In this process, counterpublics, such as LGBT communities, can use alternative platforms to bid for the information elite status. However, the empowerment of counterpublics through technologized news acts can have both positive and negative social impacts. Recent studies have revealed how antidemocratic forces can brew through networked news participation (see Quandt, 2018, about "dark participation"). The transformation of power relations can also aggravate unequal access to civic speeches and perpetuate unjust and oppressive social hierarchies.

Our argument therefore recognizes the coconstitution of power and technology in news acts. Power dynamics are emphasized as both the condition and the result of a particular mode of participation. The networked characteristic of digital news participation makes this dialectical dimension of power more visible and constant. The proposed framework (i.e., technologization of news acts) formalizes the emergent opportunities and infrastructural constraints in the theorization of networked news participation and allows communication researchers to show how interactions and power dynamics take shape in media production.

This framework is relevant to ongoing conversations about civic journalism (see Glasser, 1999; Rosen, 1999) and networked journalism (see van der Haak, Parks, & Castells, 2012). Journalism, in an age of digital proprietary and nonproprietary platforms, flourishes with the inclusion of a wider range of noninstitutional social actors while becoming more contested as an institution to coordinate civic acts. The peripheral positioning of these actors is increasingly relative, and they contribute to diverse types of news acts as part of the news ecology with plural cores. The framework is thus useful to explore how technological and civic forces converge to reconstitute news ecology when they are incorporated into the discussion of journalism and activism (see Russell, 2016). As in the example of Chinese LGBT news ecology, technologization melds milder forms of activism into news acts, bringing in new norms and values that alter the bounds of journalism and push back against norms such as rigid objectivity.

To conclude, while explicitly accounting for locality-specific contexts, the conceptual framework we propose can be applied to transcultural and comparative inquiries in journalism studies (see Örnebring, 2012). In the example discussed in this article, the Chinese news ecology presents unique challenges from systematic censorship to the lack of press independence. But these constraints make technologized news acts more analytically distinct. Moreover, the specificities of Chinese news ecology should not be understood on the terms of an East–West dichotomy. The information flow between the state and the civic sphere is always dynamic, contested, and conditioned by structural forces, even under the most democratic regime. One implication of our analysis is that the ecology of self-media deserves more attention from journalists and scholars, as it may represent marginalized communities more reliably and anchor news acts around minority issues.

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