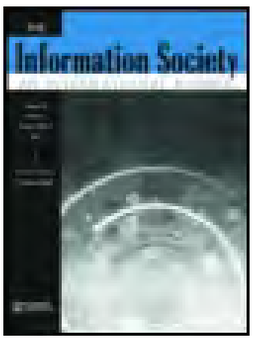

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Social constructivist account of the world's largest gay social app: Case study of Blued in China

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ABSTRACT

Given China's political conservativism and limited social acceptance of sexual minorities, it is paradoxical to find that Blued, a gay social app headquartered in Beijing, has become the largest app of this kind globally. Informed by the social construction of technology perspective and based on a yearlong ethnography, this article identifies three major factors that have shaped the developmental trajectory of Blued: (1) work with the Communist Party of China to employ Blued as a health education platform; (2) switch in orientation from a hookup app to a social app; and (3) push for the commercialization and internationalization of the app. This article spotlights that the voices of users were missing in the development process and argues that, for Blued to continue maintaining its success, it must stop relying on the "I-methodology" in its design and development. Lastly, it contributes to the SCOT scholarship and social app studies by deciphering the role of the state in app development in the Chinese context.

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App development; Blued; China; dating app; social app; social construction of technology

Studies of gay social apps[1] typically focus on how users experience them (e.g., Blackwell, Birnholtz, and Abbott 2015; Chan 2018; Licoppe, Rivière, and Morel 2016; Yeo and Fung 2018). Following Mosemghvdlishvili and Jansz (2013), who study the politics of app development,[2] we believe that it is also important to examine the production of gay social apps. We study from the social construction of technology (SCOT) perspective the production of Beijing-based Blued, which is currently the world's largest gay social app serving 40 million people in 190 countries.[3]

Blued is an interesting site to explore the intertwining dynamics of politics, visions, and capital in app development. Its success is paradoxical because it comes from China, a country notorious for its political conservativism and limited social acceptance of sexual minorities. Only 21% of the country's population believes that society should accept homosexuality (Pew Research Center 2013). Furthermore, the state often censors LGBTQ content (Brammer 2018). Yet, Blued received public recognition in 2012 from Li Keqiang, the then-vice premier of China (Wei, Zhong, and Zhu 2017). It has also successfully raised several rounds of funding in the Chinese capital market (Crunchbase 2018).

In what follows, we start by providing an overview of SCOT. We then describe our three-pronged research methodology—archival research, ethnography, and in-depth interviews. In the results section, we analyze how the state, visions of Blued founder and staff members, and the capital market shaped the developmental trajectory of the app. By shifting our analysis from usage to production of an app, we make three contributions. First, we decipher the factors that have led to the dual success—political and financial—of this gay social app in a not-so-gay-friendly society. The SCOT perspective restrains us from regarding technology as an artifact outside of social relations. Second, we flag that neglecting the voices of its users may not benefit Blued's development in the long run. Cultivating a sense of belonging to the gay community among gay users is essential for the sustainable development of the industry and doing so requires input from actual users. Lastly, we contribute to the SCOT scholarship and social app studies by spotlighting the role of the state in app development in the Chinese context.

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SCOT and social app studies

The SCOT perspective emphasizes that the development of a technological artifact is neither inevitable nor linear. Instead, technology development needs to be regarded as a series of variation and selection (Pinch and Bijker 1987). In effect, no outcome is predestined.

Analysis informed by SCOT begins with identifying social groups that are relevant to the artifact in question. These diverse social groups, with their unique political influence, economic strength, and social status, compete to define problems or issues related to the artifact. The solutions that are offered to tackle these problems or issues are evaluated not only on the basis of technical superiority, but also the power dynamics of the groups, as there is scope for "interpretive flexibility." At some point, the development of an artifact is stabilized. Kline and Pinch (1996) note that this stabilization "need not be final," as new problems and solutions related to the same technological artifact may emerge.

Very often, the construction of technology may "involve economic decisions made by complex social institutions operating over long periods" (Cowan 1985, 203). Cowan (1985) traces the history of domestic refrigerators. Gas refrigerators competed with electric refrigerators in the early 1900s. Although, as we know, the familiar electric refrigerators won, gas refrigerators were technically superior because they were quieter, cheaper, and required less maintenance. However, because the manufacturers that produced gas refrigerators lacked financial capital, skilled labor, industrial competition, and support from utility companies, the gas refrigerator eventually lost its market share. This case illustrates how non-technological factors—economic and industrial pressures in this case—play a critical role in shaping technological development.

Not only everyday household appliances, as Molotch (2004) shows at depth, but also large-scale infrastructure such as nuclear power are products of the coalescence of different social factors. In their analysis of the development of nuclear power in the United States and South Korea, Jasanoff and Kim (2009) found that the governments in the postwar era had very different interpretations of nuclear power. United States focused on containing radiation release because in America nuclear power was seen as a source of potential catastrophes. In South Korea, on the other hand, nuclear power was considered as a means to end dependence on foreign powers. This belief pushed this small country to aggressively develop nuclear energy in the 1970s. Their analysis shows the critical role of the state in technological development.

Drawing on the principles of SCOT, communication researchers have analyzed the development of communication technologies. For example, Siles (2012) traces the development of blogging, detailing how interpretive communities, websites, discourse, and online sharing practices came to construct blogging as we know it. In his work on the development of augmented reality technologies, Liao (2018) highlights the critical role future visions of communities play in contesting the meanings of these technologies. He argues that "future visions create the institutional and organizational momentum supporting the technology and are important to understanding the design of technologies" (799).

Nonetheless, limited effort has been made to employ the production studies approach in the study of social apps. Exceptions include Liu (2016) and Murray and Ankerson (2016). Liu (2016) examines the "sanitizing" project of Momo, a Chinese social app for the heterosexual population. Pressured by anti-pornographic regulations from the Communist Party of China, Momo has gradually been transformed from *yuepao shenqi* (literally meaning "a magical tool for hookups") to a desexualized socially focused app. Murray and Ankerson (2016) trace the development of the lesbian social app Dattch and its rebranding to Her. They explicate the link between the evolution of the app's design, the founder's response to market reactions, and the company's participation in a tech accelerator program[4].

Based on SCOT, we ask the following three questions: Why did Blued succeed? How did Blued change over time? What factors brought about these changes?

Methodology

We employed a three-pronged methodology. First, we conducted archival research examining news articles and online discussions on Blued. Using Baidu, a major Chinese search engine, we collected and reviewed approximately 600 news articles about Blued published from 2013 to 2017.

Second, from October 2017 to July 2018, the first author conducted 10 months of ethnographic research at the Blued headquarters in Beijing. He sent an initial request to Blued in summer 2016, expressing our interest in conducting fieldwork in the company. The founder and chief executive officer, Geng Le, was reluctant at first. By providing logistic coordination and translation for Blued during New York Pride in 2017, the first author gained the trust of Geng Le, who later agreed to let him conduct participant observation in the company. The first author then joined Blued as a full-time staff member, working from

Monday to Friday every week. His status as a researcher was known to other staff members. He was allowed to participate in various company events, including meetings with investors, advertisers, and government officials.

Third, during the fieldwork, the first author also conducted interviews with eight managerial staff members, including Geng Le. These staff members worked in different divisions of Blued. Each of the interviews, usually conducted after a social event, lasted for approximately 30 minutes. The interview topics included Blued's origins, challenges and opportunities, role in the gay community, relationships with the state and investors, and outlook. Although the interviews were not audio-recorded, the first author made detailed notes during the interviews. To gauge users' perceptions of Blued's design and positioning, we also conducted supplementary interviews with seven Blued users in Beijing. These interviews were semi-structured and lasted for 30 to 60 minutes each. We summarize our informants' information in Table 1.

We examined the data and field notes following the grounded theory approach (Glaser and Strauss 2017). We identified three major forces driving the development of Blued, namely the state, the founder's and staff members' visions, and the capital market. Each of the them pulled the app toward a particular developmental trajectory. In the following sections, we detail their role in shaping Blued. We translate quoted Chinese interview extracts and news articles into English.

Findings

Working with the state as a health education platform

Blued was founded by Geng Le, a former Chinese policeman, in 2012. News media portrayed Blued as a business miracle, most visibly in article titles such as the following: "Took off the police uniform and built an online kingdom of Chinese homosexual people" (He 2016) and "Highly popular gay social app Blued surpasses its Chinese and American competitors" (China National Radio 2015). Such stories have focused so much on Geng Le's personal background and the app's success that they have rarely touched upon the convoluted political dynamics underlying the app's development and operation. For instance, in a press interview (Sina Technology 2017), Geng Le asserted that the Communist Party of China's attitude toward sexual minorities had already improved. On the other hand, the state's continuation of its regulation of LGBTQ-themed activities and media content shows that such improvement is only partial.

Before founding Blued, Geng Le had secretly run, since 2000, the gay online forum danlan.org. He also had a good friend working in the police's Internet regulatory department. Therefore, he understood how crucial the state's policies were to the operation of his website. To prepare for the 2008 Olympic Games, the Chinese state's press Xinhua News Agency promoted danlan.org globally to showcase Beijing as a liberal and free city (Cao 2015). This was the first time in modern Chinese history that a state mouthpiece had positively portrayed homosexuality. Sensing that the state's attitude toward homosexuality might have become favorable, Geng Le and his team set up their office in Beijing in 2009 (Geng 2014).

If the Beijing Olympics gave Geng Le a symbolic green light to publicly run a gay platform in China, the state's efforts to control HIV/AIDS offered Geng Le and his platform a practical raison d'être. Since 2003, China had collaborated with international organizations in combating the spread of HIV/AIDS

Table 1. Respondent demographics.

Description	Gender	Age (years old)	Years worked at Blued	Years used Blued
Founder Geng Le	M	45–50	7	/
Vice President 1	M	35–40	2	/
Vice President 2	M	40–45	2	/
Head of Public Services	M	30–35	5	/
Head of Marketing	M	35–40	2	/
Head of Human Resources	F	40–45	3	/
Head of Design	M	35–40	1	/
Head of International Business	M	30–35	2	/
User 1	M	20–25	/	1
User 2	M	50–55	/	2
User 3	M	35–40	/	5
User 4	M	20–25	/	1
User 5	M	30–35	/	3
User 6	M	35–40	/	3
User 7	M	20–25	/	2
User 8	M	25–30	/	1
User 9	M	20–25	/	2
User 10	M	45–50	/	3
User 11	M	20–25	/	3

and received considerable funding for HIV/AIDS control (Gåsemyr 2015). However, the state lacked experience in reaching gay communities: "The government did not know where to find this group of people. Later, those from the Center for Disease Control and Prevention (CDCP) realized they should visit (gay) bars, but they could only reach a dozen people per night" (Geng Le, personal interview). This was the moment when Geng Le saw an opportunity to work with the state:

> We talked to Changping district's CDCP.[5] I said that I was the person in charge of the largest gay website in China and we hoped to help you [them] carry out HIV/AIDS prevention. Upon hearing this news, the leader at the center was delighted. He said, "Geng Le, you came at the right moment. We have been looking for homosexual people, but we could not find any." (TMT Post 2015)

This district level meeting with Changping's CDCP led to further collaboration with Beijing's CDCP at the city level and, eventually, with the Ministry of Health at the national level. In 2012, the then-vice premier of the People's Republic of China, Li Keqiang, met with Geng Le, recognizing his platform's contribution to the national HIV/AIDS prevention efforts. Summarizing his method of navigating the political landscape, Geng Le said the following:

> We need an angle from which the government notices our existence and supports us. If you talk about equality and rights for homosexual people, the government won't be happy; if you tell the government that you can help with HIV/AIDS prevention, the government will be very happy. (Zuo 2016)

In our fieldwork, we noticed that Blued's collaboration with the state has been institutionalized. A division of Blued works directly with the state's CDCP and provides front-line HIV tests for the community. At Blued's headquarters, a whole floor is dedicated to HIV testing, with more than 100 volunteers carrying out testing every day. According to internal data, more than 10,000 people received HIV tests at Blued in 2017. One of the vice presidents of Blued told us the following:

> Most public relations efforts [made by other companies] are formalistic, such as planting trees together, holding fundraising parties and so on. Few corporations have public relations efforts like ours that directly undertake government duties. Only once you've officially become part of the government can collaboration be truly enduring and reliable. (Vice President 1, personal interview)

Nevertheless, Blued recognizes that working with the state is a long-term and complicated task. Currently, the Central Cyberspace Affairs Commission, a state agency established in 2014 to manage Internet ideology and content, regulates Blued's operation (Miao and Lei 2016). Therefore, building a favorable relationship with the commission has become Blued's priority. Furthermore, Blued has dedicated staff members whose duties are to approach various governmental departments on a daily basis and make them aware of what Blued is working on (Zuo 2016). To maintain state's trust, Blued seizes all opportunities to position itself as a health education platform.

A close relationship with the state also poses challenges for Blued. First, the messages on HIV/AIDS prevention disseminated through the app to its users (including private messages and public advertisements) are considered excessive by some: "If you see something negative, something about the disease every day, you will feel that this community is very messy" (Head of Design, personal interview).

Second, political sensitivity has led to self-censorship:

> Tall trees catch much wind. I don't know how many people are watching you [us]. If we were a heterosexual app, or if we ranked second or third in this [gay social app] industry, we wouldn't work so cautiously. To perform anything, we need go beyond the government's standards. (Head of Marketing, personal interview)

This suggests that Blued must acts with political correctness. During our fieldwork, we noticed that although Blued is a platform for gay men, it bans the word *tongzhi*[6] from appearing in its promotional materials. Furthermore, Blued arranged for its staff to learn the principles delivered by the 19th National Congress of the Communist Party of China in 2017. It is also trying to establish a Communist Party branch within the organization. Lastly, in early 2019, the app was blamed for the increase in underage HIV infections. Before any government agency demanded it to do so, the app immediately halted new user registration for a week (Reuters 2019).

Third, Blued's extreme politicization has created tension between itself and other LGBTQ rights organizations. Several staff members told us that to avoid unnecessary political risks, Blued deliberately keeps a distance from these human rights organizations, which often criticize Blued's political conservatism.

Dealing with different visions: Hookup app versus social app

SCOT studies, such as that of Liao (2018), show that the visions of developers often drive an artifact's developmental trajectory. Blued has a strong company

vision, but this vision sometimes conflicts with how the state perceives Blued.

Blued believes that sex, to the gay community, is a *gangxu* (a demand that needs to be fulfilled regardless of the cost). In many of our interviews, Blued's staff members were overt about Blued's fundamental purpose to satisfy the sexual needs of its users, saying, "*Tongzhi* are just human beings, they have normal needs. This topic [sex] can never be avoided" (Vice President 2, personal interview), "Not chatting about sex, not chatting about work? Why would two strangers talk to each other?" (Head of Design, personal interview), and "We are in the information age. Even if gay websites are closed down, people would look for others like themselves via Baido, QQ, or Tieba. This is because we can never eliminate humans desire for sex" (Geng Le quoted in Li 2015). Elaborating on the origins of Blued's sexual focus, Geng Le explained, "[Grindr] needn't come up with fancy or complicated features. It just completely focuses on hookups" (Zuo 2016).

In contrast to Blued's focus on sex, its then-major competitor Zank emphasized socializing and took a strong position against hookups. The slogan on its official website[7] says, "A person is not just a number such as age, height, or weight, but emotions and stories." Zank went out of business in 2017. Blued's head of marketing attributes Zank's failure to its positioning: "*Tongzhi* have not had their fundamental need fulfilled. How could they be elevated to pursue needs on the mental level?" (personal interview).

Blued now faces another competitor, Aloha. Following the design of Tinder, Aloha requires mutual liking before two users can communicate (Figure 1) and encourages the use of real photos. Our informants believed that compared to Blued, there are more authentic and good-looking photos on Aloha (Users 2, 5, and 8, personal interview). The two competitors

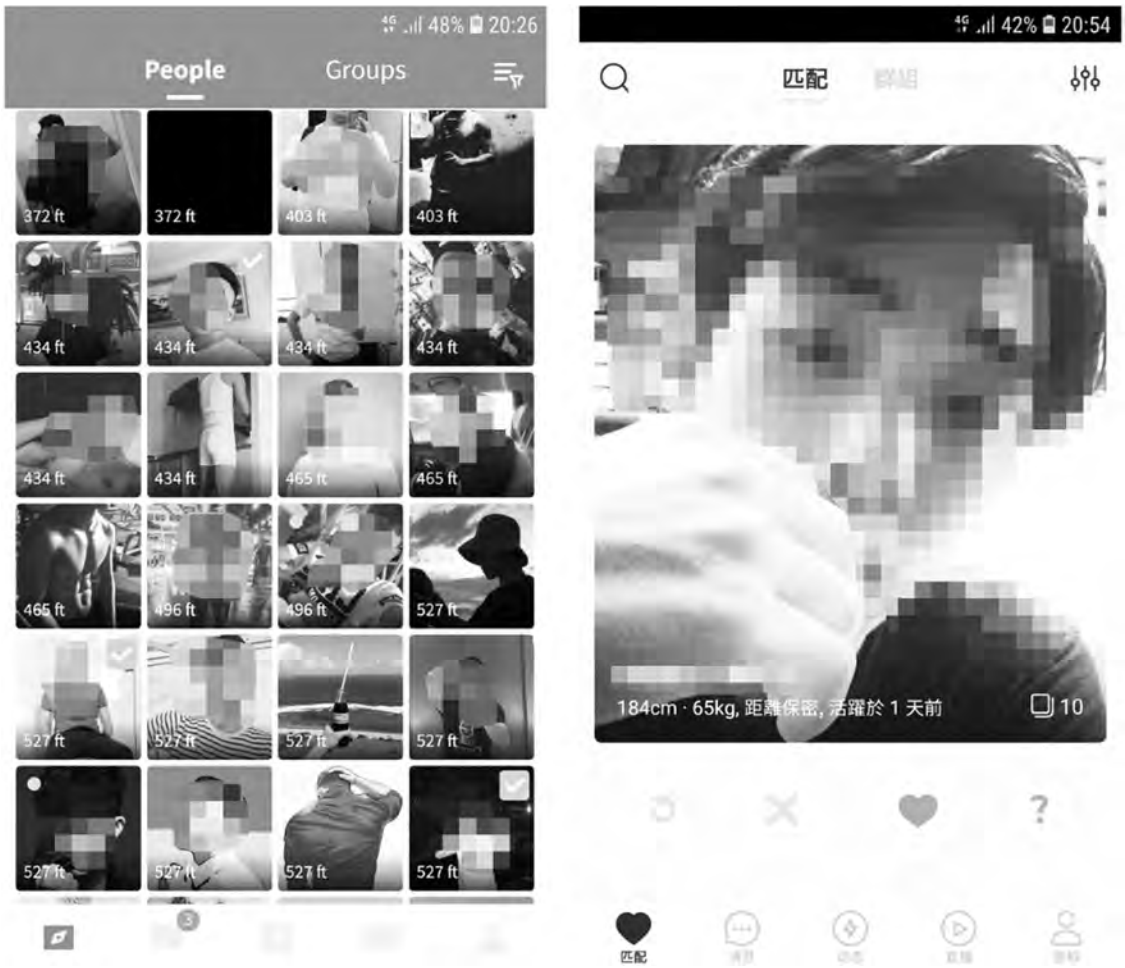

Figure 1. The interfaces of Blued and Aloha.
Notes. Blued's interface (left) uses a grid format, similar to Western gay social apps (e.g. Grindr and Jack'd), whereas Aloha's interface (right) uses a swipe format, similar to Tinder. Source: Second author.

have publicly attacked each other. Blued derided Aloha users as "ladies who go to the gym every day, need not work, and travel around." Aloha quipped, "Thanks for the compliments. Aloha users are all winners in life!" (Li 2016). What is reflected in this controversy is the sharp difference between Blued's and Aloha's targets. Geng Le explained Blued's initial market positioning as follows:

> When we first designed Blued, we also had a debate. Should we make Blued into a product like MSN (for the high-end market) or like QQ (for the low-end, mass market)? Later, we learned a very insightful saying: "Winning the underdog wins the world." Being the largest group of users … the social underdog market consists of a massive population and is extremely important. Only if we can capture this segment can we make our product scalable. (Geng Le quoted in Iheima 2015)

Driven by the desire for sexual fulfillment, Blued was initially built as a replica of Jack'd, a Western gay social app. Geng Le told us, "I hired a few college students. I told them, 'Imitate Jack'd and make an exact copy'" (personal interview). Blued follows its overseas predecessors' design, integrating geolocation information and photographic profiles. The proximity of two users, combined with sexy and masculine self-presentations, affords immediate hookups (Blackwell, Birnholtz, and Abbott 2015; Licoppe, Rivière, and Morel 2016). "In the past, there was no one [on the Internet]; now, people are everywhere [on Blued]. To chat or not depends on photos. If he is good-looking, I'd chat" (User 2, personal interview). Our informants' views support research on the phenomenon of "relationshopping" in online dating (Heino, Ellison, and Gibbs 2010), where initial contact decisions are made based on others' photos (Users 4, 7, and 11, personal interview).

Due to its design, many Blued users blame the app for encouraging one-night stands, leading to the spread of HIV/AIDS. Therefore, the app has been notoriously named *aizi lan* (literally meaning "AIDS blue"). When a journalist asked about the influence of Blued on gay men's lives, Geng Le said, "Blued is a channel, a platform, a tool. The key lies with the users" (personal interview). Geng Le puts the responsibility on the users; this is also the dominant view among the staff. Defending the neutrality of the app, the head of public services argued, "If people hook up in pubs, does this mean we should shut down all pubs?" (personal interview). However, as Winner (1980) points out, artifacts are not neutral. Artifacts, according to Lievrouw (2014, 27), "are the embodiment of the political, economic, social, and cultural conditions of their development and creation … They are the physical manifestation of those conditions" (Lievrouw 2014, 27). In effect, their visions of the app—to fulfill the sexual needs of its users—informed its design.

However, to demonstrate to the state that it is not a hookup app, the team has implemented new policies and added new features. First, a 70-people content management team has been tasked to reduce the pornographic content on Blued. The team approves any publicly visible photos and monitors live streaming content 24 hours a day. Second, Blued added a "Post" function and a "Groups" function in its two revamps in August 2013 and May 2014, respectively. The "Post" function is similar to the "Status" function of Facebook. When a user publishes a post, his connections on the app and people physically nearby can see it. The "Groups" function allows users to set up discussion groups for their hobbies and interests, increasing users' stickiness. Blued's staff members believe that these new functions can help users to expand their social circles and build relationships beyond hookups. Third, the newly added "Explore" function aims to cultivate a sense of community by offering discussion topics and encouraging users' contributions. These topics, appealing to the interests of the users, include "Should old virgins feel confident about themselves?" and "Must sexual incompatibility result in breaking up?"

In short, although Blued's founder and his staff strongly believe in satisfying users' sexual needs, they want to de-stigmatize the app at the same time. The positioning of Blued has gradually shifted from an individualized platform for "chats and hookups" to a communal social app with "interactions, sharing, news, and life" (Head of Design, personal interview).

Attracting capital as a profitable startup

Cowan's (1985) analysis of gas refrigerators demonstrates that a lack of financial capital can contribute to the disappearance of a technically superior product. Capital also plays a significant role in the development of Blued. During its early years, Blued resisted commercialization and advertisement placement (Si 2015). When investors first came to Blued, Geng Le was confused: "When, for the first time, someone gave us CNY3 million (approximately USD433,000) during the seed round, I was still puzzled" (Zhao 2015). Upon receiving the first round of funding, Blued transformed into a startup. Geng Le told us that businesses love gay users because gay users not only have strong spending power but also unique tastes and

clear consumption patterns, which make targeting easier.

Domestic pink money has quickly caught the attention of businesses. In 2015, many Chinese Internet companies and mainstream brands changed their logos to rainbow colors. For example, Tmall.com, an online retailer similar to Amazon.com, changed its cat logo from black to rainbow colors. Phone maker TCL put the slogan "Live a colorful life!" on its rainbow-colored screen protectors. Baidu Maps (the Chinese counterpart of Google Maps) and Youkou (the Chinese counterpart of YouTube) also participated in celebrating the pink economy (Chu 2015). In the same year, Blued, along with the shopping website Taobao, sponsored seven pairs of same-sex couples to travel to Los Angeles to get married (Yang 2015). It appears that online retailing sites are very interested in the LGBTQ community. Geng Le even disclosed that advertising spaces on danlan.org were purchased immediately by such sites whenever available.

Blued's transformation into a startup attracted further investors, earning CNY3 million in the seed round in 2013 and USD10 million from Series D funding in 2018. To venture capitalists, what is crucial is the lucrative market tapped by the app. David Chao from DCM Venture, which invested in Blued during the Series B and Series C funding rounds, explained, "Worldwide, gay social apps have had strong demand and have demonstrated huge development potential" (Wang 2016). At the same time, the financial returns on Blued have proven highly satisfactory: the app provides the highest return on investment of the 150 projects in which Zhulu Capital, Blued's 2013 angel investor, has ever invested (Cyzone 2015).

Driven by the logic of capital, attracting new users and maintaining existing ones have become paramount. Blued's founder described his new vision as follows:

> Starting from a gay man at the center, the first level is to look for other gay men nearby. The second level is [to reach] the *tongzhi* social circle. Offline consumption venues and online retailing websites are on the third level. (Geng Le, personal interview)

For an Internet company, the basic business model is to accumulate as many users as possible, retain them, and then monetize them. This business model is manifested in Blued's design and development.

First, to retain users, a community must be built. Although Blued has a large user base, those who use Blued for hookups are usually not active enough and do not stay long enough. Such users tend to move to WeChat quickly once a connection has been made (Head of Design, personal interview). Geng Le believes that retaining users depends on cultivating an interactive atmosphere that encourages long-term engagement between users based on common interests. As members of the gay community share some interests that members of other communities do not, appealing to the unique needs of the gay community becomes critical. For example, in Blued's Groups function, the pre-established categories in the international version of Blued include "Fashion & Beauty," but include "Cooperative Marriage"[8] and "Coming Out" in the domestic Chinese version.

Second, live streaming as a form of entertainment has recently taken off on the Chinese Internet. Although Blued was not the first app to launch a live streaming function, it is now the most profitable division of Blued's core business (Vice President 1, personal interview). Geng Lee was unwilling to disclose the exact figure but said that the average revenue per user of Blued live streaming is three to five times that of other live streaming platforms (personal interview).

In 2016, China officially faded out its one-child policy, allowing Chinese citizens to have up to two children without penalty. Based on a large-scale survey, Blued found that up to 40% of Chinese gay men had considered surrogacy services overseas (Li 2016). The change in law and the market insight led to the establishment of Bluedbaby, a surrogacy consulting service operated by Blued, in 2017. This new business division collaborates with surrogacy service providers in California. Although Bluedbaby charges approximately CNY1 million (USD144,000) per case, it successfully secured 50 clients within 6 months, becoming the most lucrative division of Blued (Vice President 2, personal interview). Another vice president explained that because China is a family-oriented society, continuing one's lineage is a major social and familial pressure for those in the LGBTQ community. With Bluedbaby, Blued "satisfies another *gangxu* of the users" (Vice President 2, personal interview).

Finally, the domestic market, albeit gigantic, remains limited. Since 2014, Blued has begun internationalizing. In 2016, it entered into a partnership with Hornet, a California-based gay social app (McCormick 2016). Blued currently offers 11 languages in 190 countries and is a market leader in Southeast Asia and Mexico (Head of International Business, personal interview).

Capital plays a significant role in shaping technology, but its influence cannot be pre-determined. In Murray and Ankerson (2016) analysis of Dattch/Her, the tech accelerator program provided the founder time to slowly develop a community feeling for the app. On the contrary, for Blued, meeting the

expectations of venture capitalists means constant efforts to catch up with the market and predict trends:

> Upgrades to the Internet and technology are too fast … We must follow trends closely or we will fall behind. Live streaming is now our cash cow, but who knows what's next. People [competitors] do not know and are looking for it. So, you have to move before others do. (Head of Marketing, personal interview)

The second implication of the capital in Blued's development is that Blued has fully transformed into a commercialized platform. For example, Blued makes a profit from its live streaming division by charging audiences who buy virtual gifts for their favorite live streamers. In a way, Blued is promoting a materialist interpersonal relationship.

Discussion: When politics, visions, and capital coalesce

The case of Blued is interesting because it thrives in China, a country where homosexuality remains stigmatized. Although homosexuality was decriminalized and de-pathologized in 1997 and 2001, respectively, living a gay life in China is still difficult. Gay men and lesbians face enormous pressure from their families and coworkers (Kam 2013; Kong 2011). Unlike Taiwan, where same-sex marriage has been legalized, the current marriage law in China makes no room for same-sex marriage. Activities organized by LGBTQ organizations are occasionally raided by the police and their members are often harassed or detained (Davis and Friedman 2014). With this unfavorable social and political background, we wanted to know how Blued thrives. We found the rise of Blued to be the product of the coalescence of persistent political influence, evolving company visions, and burgeoning capitalist interests. Figure 2 summarizes our analysis.

Blued tactfully navigates the sensitive political landscape by emphasizing its essential role as a channel through which the country's gay population can be reached, thereby demonstrating its value to the state's fight against HIV/AIDS. This secures its *survival*. Blued simultaneously taps into the growing pink economy, a niche market recently discovered by Chinese businesses. China's economic reform since the late 1970s and its integration into the global economic system in 2001 have transformed state-owned enterprises into rent-seeking corporations (Keith et al. 2013). Within the parameters granted by the state, Blued acts on and reacts to the capital market, continually adding new functions and business divisions. This ensures its *growth*.

In the process, Geng Le's role is critical. As the founder of danlan.org and Blued, he takes the political

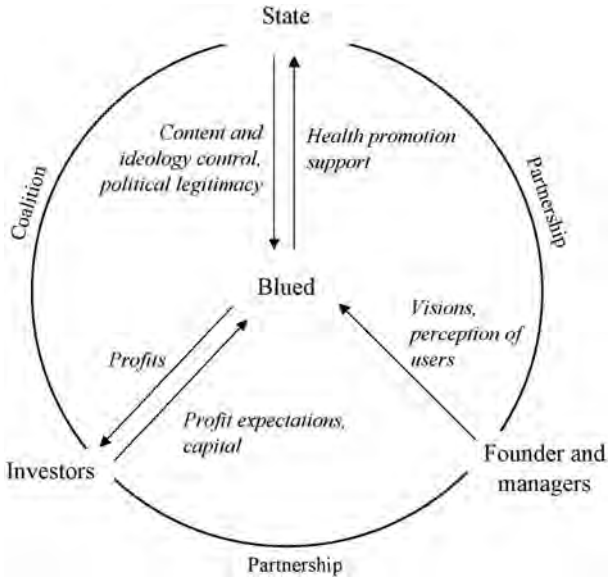

Figure 2. The rise of Blued as a product of the coalescence of political influence, company visions, and capitalist interests.

risks. The initial development of Blued was shaped by his reading of the political circumstances. Volunteering to assist the local CDCP in reaching the gay population could have been detrimental to his personal life and the platform. However, his decision was based on the state's positive recognition of danlan.org during the Olympics and the fact that the CDCP's officials had difficulty reaching high-risk populations. To accommodate the expectations of the state and the capital, Geng Le and his team developed Blued in ways that have led to its present version.

However, we argue that Blued's submission to the state should not be treated as an outright selling-out of Chinese gay men or a manifestation of homonormativity (Duggan 2003). Instead, these efforts are akin to what Chua (2012) calls "pragmatic resistance," a set of strategies that avoid confrontation with authoritarian governments like Singapore. For example, Pink Dot organizers in Singapore chose to comply with the law to restrict foreigners from joining the main assembly but creatively created ways for them to participate (Jerusalem 2018). If Blued had not aligned itself with the goal of the state, it would not have achieved its current scale. The enormous scale of Blued has brought an unprecedentedly level of convenience to the Chinese gay community, an accomplishment that cannot be discounted.

Missing voices of users

Our critique to Blued's development concerns the missing voices of actual users. During our 10-month fieldwork at Blued, we found very little evidence that

Blued wanted to understand its users' psychology and experiences. The first author was asked by Blued to conduct research on the topic of HIV/AIDS prevention, not on users' experiences. At the outset, Blued's team conceptualized their users as mainly driven by their sexual needs and, therefore, designed the app to facilitate hookups (following the design of Jack'd). This conceptualization, instead of coming from market research, was based on the unchallenged assumption of the staff members, most of whom identified themselves as gay. This practice reflects a typical "I-methodology," in which designers consciously or unconsciously take their personal experiences as representative of the users (Akrich 1995).

During our interviews, senior managers often articulated two ideas. First, they are gay and use the app too, so they must understand their users. Second, the Internet business evolves too quickly, so they have no time to solicit feedback from their users. Even after the intensified collaboration with the state and venture capitalists, Blued's decisions to integrate new functions into the app and to explore new business were also driven by the "I-methodology." For instance, adding live streaming to Blued was based on managers' perceived popularity of the function among their users. The expansion into the surrogacy consulting service was primarily driven by Geng Le's personal experience in going through the process. Central to SCOT is identifying the power differentials of various social groups that are relevant to the artifact in question. In short, whose interpretation carries more weight? Among all of Blued's relevant social groups, users seem not to matter (Oudshoorn and Pinch 2003). Users, in a sense, appear in our framework only as an imaginary entity.

We see the current success of Blued as a manifestation of "first-mover advantage" (Suarez and Lanzolla 2005). Being the first in the gay social app market in China, Blued has attracted a critical number of users. For a gay man who wants to meet other gay men, it is natural to join a platform that has the most users.

However, as other apps such as Aloha are entering the market, Blued must devise strategies to retain its users. Fiore and Donath (2004) point out, dating services generally face a dilemma: "A user who succeeds in finding a good match will no longer need the site" (1397). Geng Le and his managers recognized this problem. That is why they introduced several community-based features, hoping to create a sense of belonging among Blued users. We have seen Grindr's recent "Kindr" campaign to alleviate discrimination on the platform, in order to create a better community. What is uncertain in the case of Blued is that, how its actual users interpret these community-based features. Because the Blued management team does not invest in engaging with actual users, the team does not know if their users enjoy using the community-based features. Worse still, because Blued managers imagine their users to be similar to themselves—urban, young, and middle-class, Blued does not know if these features cultivate any sense of belonging among its other actual users, whose demographic profiles may or may not fit into those of the imaginary users. We argue that, to build a gay community for its future success, Blued must stop relying on the "I-methodology" and engage with its actual users.

Implications for SCOT and social app studies

The case of Blued highlights the fundamental role of the state in shaping how a technological artifact comes into existence in the Chinese context. SCOT researchers remind us that the state often plays a regulatory role in the development and design of technology, but the role of the state in the development of communication technologies in democratic countries is relatively much less. For example, Siles (2012) traces the rise of blogging in the late 1990s and finds that the social group particularly relevant to the stabilization of blogging was a group of users who referred to their websites as "weblogs." Likewise, the significant relevant social group for the initial development of augmented reality technologies was not the government but two groups of advocates (one group believes that augmented reality should be delivered via mobile devices and the other believes that it should be delivered via headworn devices) (Liao 2018). In the development of Dattch and its later rebranding into Her, the role of the state was also not prominent (Murray and Ankerson 2016). Mosemghvdlishvili and Jansz (2013) entirely ignore the possible roles of the state in regulating the content of apps. Perhaps the fact that technology companies in democratic countries can negotiate with their governments (e.g., electric scooters in California or the Internet) renders the state weaker.

However, the role of the state in Blued's development is relatively deterministic and manifests in the first instance (Fung 2018). We use the phrase "relatively deterministic" because we do not deny the fact that governments in democratic countries also have various laws regulating *how* a technological artifact can be developed. But in China, the state decides both *if* and *how* a technological artifact can be developed: The birth of Blued was predicated on the green

light given by the authoritarian state, and the continuation of its business also depends on the state. Rela, a popular Chinese social app for lesbians founded in 2012 (the same year as Blued), was taken off the shelf temporarily in 2017. Popular speculation about its shutdown centers on the fact that the company organized an event in Shanghai demanding marriage equality, touching on a politically sensitive issue (Fu 2017).[9] However, Blued has avoided engaging in any gay rights campaigns since its inception, thereby remaining on good terms with the state.

As many Chinese Internet researchers have pointed out, the Chinese Internet is a coalition between media and Internet corporations and the state, characterized by its apolitical and economic nature: As long as no politically sensitive and socially mobilizing content is involved, the Internet can freely provide all kinds of online entertainment and services (Hong 2017; Weber and Jia 2007). Discussing the relationship between the technological system and its environment, Hughes (1994) observes that only young technological systems are easily shaped by political, economic, and value components, whereas more mature systems are relatively autonomous. The case of Blued shows that even a mature system can be continuously subject to political influence if the state is authoritarian. SCOT and social app researchers should continue paying attention to the role of the state under different political structures in influencing the development of a technology (Klein and Kleinman 2002).

Conclusion

As social apps for the LGBTQ communities continue to develop in China and globally, our analysis of Blued indicates that their success and failure are contingent on the tension and balance between various social forces. In particular, based on our ethnography, interviews, and archival research, we explain the rise of Blued in terms of its political alliance, its founder's and staff members' visions, and its venture capitalists' investments. We also suggest that Blued must truly engage with its actual users if it wants to build a gay community. For future SCOT and social app studies in the Chinese context, we spotlight the deterministic role of the state in the development of technologies.

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Notes

1. We use "social apps" rather than "dating apps" or "hookup apps" to refer to communication platforms such as Grindr, Tinder, Blued, and Momo.
2. Mosemghvdlishvili and Jansz (2013) examine how app developers understand their role in the app development process and negotiate their power with operating system providers.
3. https://www.blued.com/en/index.html (accessed on October 15, 2018).
4. This is similar to a startup an incubator but incubator focuses on innovation while an accelerator focuses on growth.
5. Changping is a district in Beijing.
6. We keep *tongzhi* (literally meaning "comrades," a generic term that refers to sexual minorities), as it reflects the legacy of communism (e.g. Chou 2000) in Chinese pinyin.
7. http://www.feizan.com/ (accessed on October 15, 2018). (While Zank went out of business in 2017, its website is still there and has not been updated since then.
8. "Cooperative marriage" refers to marriage between a gay man and a lesbian that is increasingly popular in China (Choi and Luo 2016).
9. Collective actions are what the Communist Party of China strives to curtail (King, Pan, and Roberts 2013). Accordingly, if Rela's campaign had remained online only, it would likely have not been punished by the state.

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