

Building a Digital Silk Road? Situating the Internet in China's Belt and Road Initiative

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Recently China has adopted the Belt and Road Initiative as a core component of its foreign policy. An important goal of the initiative is to connect China to major Eurasian and African nations through infrastructure building, including Internet infrastructure. Drawing on the critical political economy tradition to media policies, this article offers a broad overview of the communication and information segment of the initiative, which has so far been undervalued or even overlooked in the existing literature. Based on a two-level document analysis, I argue that a growing and complex alliance has been formed between the state and its homegrown Internet companies in building a "digital Silk Road," with a multifaceted aim to mitigate industrial overcapacity, facilitate corporate China's global expansion, support the internationalization of the renminbi, construct a China-centered transnational network infrastructure, and promote an Internet-enabled "inclusive globalization." The highly dynamic state-capital interplays, however, continue to create tensions and conflicts.

Keywords: China, Belt and Road Initiative, digital Silk Road, political economy, Internet industry, Internet police, state-capital relationship

Proposed by President Xi Jinping at the end of 2013, the Belt and Road Initiative (BRI) has increasingly become the defining policy of China's relationship with the global political economy. Referring to the "Silk Road Economic Belt" and the "21st Century Maritime Silk Road," BRI has a grand aim to build up the land and maritime links between China and major Eurasian and African countries through infrastructure building, trade, and investment. It is estimated that if fully implemented, BRI's investments will reach a total of \$1 trillion and affect more than 60 countries (Perlez & Huang, 2017). In May 2017, the first BRI forum was held in Beijing, attended by 29 foreign heads as well as top leaders from the United Nations, the World Bank, and the International Monetary Fund. CNN reports that China is building a "new world order" (Griffiths, 2017).

As the organizing concept of China's foreign policy under the administration of Xi Jinping and Li Keqiang, BRI has received much journalistic and scholarly attention. Scholars of international relations have highlighted its instrumental role in China's geopolitical strategies, viewing BRI as a direct response to the

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United States' "pivot to Asia" and the Trans-Pacific Partnership policies as well as a long-term effort to expand China's international influence and realize the "Chinese dream" (Ferdinand, 2016; Gan & Mao, 2016). Scholars of global political economy, on the other hand, have foregrounded BRI's geo-economic dimension, arguing that the plan has been driven mainly by pressing domestic economic challenges such as uneven regional development, industrial overcapacity, and the rise of China's financial capital interests (Cai, 2017; Summers, 2016; Wen, Chi, Wong, & Tsui, 2017). Overall, they agree that infrastructure building—from ports to roads to railways and gas pipelines—has constituted the "heart" of BRI (Kennedy & Parker, 2015).

Despite this general agreement, however, relatively little attention has been granted to the role of the Internet in the promulgation of BRI. Often overlooked or underestimated in the current discussion are the massive digital infrastructures (e.g., fiber-optic cables and data centers) that have been laid alongside transport and energy projects (Brown, 2017; Rolland, 2015). Moreover, with the rise of a few Chinese Internet giants in both the domestic and global markets, the past few years have seen an increase of policy discourses in China centered on building a "digital Silk Road," an "online Silk Road," or an "information Silk Road." For example, in March 2015, China's National Development and Reform Commission, the Ministry of Foreign Affairs, and the Ministry of Commerce jointly issued the first official blueprint on BRI and specifically issued a call to "create an information Silk Road," including building bilateral cable networks, planning transcontinental submarine cable projects, and improving satellite passageways (National Development and Reform Commission, People's Republic of China, 2015, para. 18). In 2016, the State Council published the "13th Five-Year Plan for National Informatization," devoting a specific section to the construction of an "online Silk Road" and encouraging the full participation of Chinese Internet companies (State Council, 2016). In May 2017, speaking at the first BRI forum in Beijing, President Xi reiterated the critical role of the digital Silk Road in the overall initiative. He called for further integration into BRI of next-generation network technologies—including artificial intelligence, nanotechnology, quantum computing, big data, cloud computing, and smart cities—to enable innovation-driven development (Xinhua, 2017b).

This article examines the rise of the concept of the digital Silk Road in China's policy discourse, elucidates its multiple dimensions, and dissects the critical role of China's Internet companies. It complements the current discussion of BRI in the communication literature by moving from a media coverage dimension of the initiative to an infrastructural dimension, foregrounding the role of Internet infrastructure (Fang, Wu, & Zhang, 2016). It also extends the existing scholarship of Chinese Internet research by shifting the focus from the domestic to the international dimension (H. Shen, 2017) and joins the growing discussion on the globalization of Chinese Internet firms (Negro, 2018). Moreover, given the large, sweeping, and often ambiguous policy discourse around BRI (Johnson, 2016), what a digital Silk Road means and how different state entities and capital units impinge on it remain far from clear in current discussions and thus require further investigation.

Drawing on the critical political economy tradition to media policies, and relying on a two-level analysis of state documents, policy speeches, industrial records, and media accounts, this article offers a broad overview of the communications and information segment of the initiative, which so far has been undervalued in English-language scholarship. I argue that the Chinese leadership has assigned its Internet companies a central position in BRI to achieve five major policy objectives: cutting industrial overcapacity,

enabling corporate China's global expansion, supporting the internationalization of the renminbi (RMB), constructing a China-centered transnational network infrastructure, and promoting an Internet-enabled "inclusive globalization." China's now-potent Internet companies, on the other hand, have also actively sought a place in this enormous state initiative to secure related funding as well as political and diplomatic support for their own business development. Despite a growing alliance that has been formed between the state and its indigenous digital players in the construction of a digital Silk Road, the complex and highly dynamic interplays between state initiatives and business imperatives continue to create tensions and conflicts.

Theoretical Framework and Methods

Instead of offering practical advice or risk assessment to the implementation of China's digital Silk Road policy, this article draws on the critical political economy tradition to media policies, which aims to "ruthlessly scrutinize these policies, expose their contingencies and contradictions" and "emphasize the power structures" (Pickard, 2013, p. 412). Within this critical tradition, scholars have emphasized the complex and highly dynamic state-business relationship in constructing communications policies, including Internet policies, in the Chinese context and have situated these policies in a broader political-economic power structure. For example, instead of focusing on the overwhelming role of state censorship in China's cyberspace, Zhao Yuezhi's analysis of China's "indigenous innovation" initiative reminds us that the country's developmental strategies for network infrastructure have been shaped by both state and corporate power (Y. Z. Zhao, 2010). Hong Yu (2017a) advances this line of analysis by arguing that despite the strong role of state intervention, China's Internet policy, after the 2008 economic crisis, has entered into a stage of "contested convergence" with global digital capitalism, which has created various forms of contentions on both the policy and business fronts. Instead of assuming the predominance of the state in China's Internet policy making, this strand of scholarship is more attentive to the varying and complex interactions between the state and its Internet companies and thus foregrounds tensions, conflicts, and unexpected outcomes. Contributing to this body of work, this article extends the analysis to China's increasingly pivotal role in global cyberspace by locating and clarifying this "state-capital nexus" in the Belt and Road Initiative—arguably the most ambitious international program since the reform and opening up. If, as Hong Yu (2017b) convincingly demonstrates, ICTs have increasingly assumed a central role in China's *national* development and economic restructuring in the Xi Jinping era, how does this policy shift manifest itself in Beijing's *international* strategies?

Focusing on BRI, this article asks why digital infrastructures and network applications have been granted a central position in BRI. How are we to understand the roles of Chinese Internet companies—from equipment vendors and network operators to Web services and application providers—in carrying forward this new international initiative? And what are the tensions and limitations?

To investigate these questions, I conducted a two-level document analysis in both English- and Chinese-language sources (H. Shen, 2016). The first step involved a systematic review of trade journals, news articles, and scholarly literature on BRI to establish the larger political-economic context. With insights gained from this review, I located and analyzed related primary documents, including official policies issued by government agencies as well as policy proposals, speeches, and interviews delivered by government

officials and Internet executives. This level of policy discourse analysis was then integrated with the knowledge obtained from the first step to create “interweaving links between the text and the political-economic contexts” (Hong, 2017b, p. 1756).

The following analysis was distilled from the two-level document research. It maps out China’s state-capital partnership in the implementation of the digital Silk Road and critically interrogates its contradictions and tensions.

Expanding Digital Connectivity for Mitigating Industrial Overcapacity

One of the critical incentives of BRI, though often downplayed in the Chinese official policy discourse, is the problem of industrial overcapacity. Although the RMB 4 trillion (\$596 billion) investment plan under the Hu-Wen leadership helped stabilize the Chinese economy during the 2008 global economic crisis, it did not solve—and, to a certain extent, might have exacerbated—the chronic surplus productive capacity that accompanied China’s foreign direct investment-driven and export-oriented incorporation into global capitalism since the late 1970s. As Barry Naughton (2017) comments, excess capacity consolidation has been a “traditional activity” of the Chinese state since 1978 and has resurfaced as a new priority under the Xi-Li administration as the Chinese economy slows down (p. 10). In 2013, the State Council released a “guiding opinion” in relation to the significant problem of industrial oversupply in China. According to the report, by the end of 2012, the capacity utilization rate of China’s steel, cement, electrolytic aluminum, flat glass, and shipbuilding industries was all below 75%, causing serious problems such as declining profits, mass unemployment, and increasing nonperforming assets. The report recommended “actively expand the external market” as one solution (State Council, 2013, para. 25). It is against this backdrop that BRI was proposed at the end of 2013.

Beijing expects BRI to play an important role in tackling this serious problem mainly through two means: first, by absorbing some of China’s excess industrial capacity through large-scale infrastructure building both in its less-developed areas and abroad; and second, by facilitating the export of Chinese goods and surplus equipment through the expansion and reorganization of transnational manufacturing and trade networks (Cai, 2017; Kennedy & Parker, 2015). A digital Silk Road, in particular, has been perceived as playing a both “pioneering” and “fundamental” role in these ambitious and interrelated goals (Yang, 2017).

A digital Silk Road is pioneering because as a forerunner of the country’s reintegration into global capitalism, the Internet sector—especially the export-oriented ICT manufacturing subsector—has suffered from the shrinkage of the external market demand triggered by the 2008 economic crisis. Meanwhile, China’s low-consumption domestic market, caused by its low-wage, labor-repressing developmental model, has so far been inadequate to absorb the massive ICT-related products it manufactured (Hong, 2017b). For example, by the end of 2015, overcapacity in China’s optical fiber and cable industry exceeded 50% and urgently needed external markets (Zhou, He, Li, & Zhang, 2015). In July 2015, the State Council released the “Guideline on Boosting International Cooperation in Production Capacity and Equipment Manufacturing,” listing the telecommunications industry as one of the 13 major sectors that need to increase “international industrial cooperation” (State Council, 2015b).

Facing the insufficient market demand, Chinese ICT manufacturers have shown enthusiastic support for BRI. In 2015, Hou Weigui, the chairman of telecom equipment vendor ZTE, openly published an article in the party magazine *Seeking Truth*, calling to expedite the construction of an "information Silk Road" along with the overall BRI initiative (Hou, 2015). In particular, given that many BRI projects are directly funded by Beijing-backed financial institutions that often explicitly or implicitly require receiving countries to outsource projects to Chinese companies, China-based Internet firms see the digital Silk Road as an opportunity to seek state largesse and political support for their own decapacity needs. For example, in 2015, China Development Bank and Industrial and Commercial Bank of China issued a \$2.5 billion credit line to Bharti Airtel, the largest telecom operator in India, for its domestic infrastructure projects. Bharti Airtel then outsourced part of its network equipment to Huawei and ZTE, boosting the external markets of the two Chinese equipment makers (Mallet & Hornby, 2015).

Apart from pioneering China's efforts in diminishing industrial oversupply, the Internet sector is also perceived as playing a fundamental role in facilitating international industrial capacity cooperation. On the one hand, ICT products and services have become integral parts of many modern infrastructures. Beijing's efforts to absorb part of its excess industrial capacity through large-scale infrastructure building, therefore, cannot be realized without the support of digital equipment and service. For example, an announced BRI railway project connecting Laos to the railway system in China involves a significant \$3.67 million on ICT service (Xinhua, 2017a). One regional director of Huawei points out that Huawei would benefit greatly from BRI not only because the ICT sector is one of the targeted areas but also because many nondigital infrastructure projects, such as high-speed railways, airports, and oil pipelines, all rely on ICT products to realize system integration (Y. N. Zhao, 2015).

On the other hand, communication networks can also help expand and reorganize transnational trade networks to facilitate the export of Chinese surplus goods and equipment. The recent efforts of Chinese steel titans to use e-commerce platforms to complement and restructure their traditional trading channels offer an illuminating case in this regard. It is reported that, along with the growing oversupply of steel in China, from 2013 to 2016, more than 200 online steel trading platforms emerged, claiming their ability to directly connect buyers and sellers, cut intermediaries, speed up the trading process, and eliminate inventory. China Minmetals Corporation, the major state-owned metals and mineral trading company, has partnered with e-commerce giant Alibaba to form a vertical business-to-business platform for steel trading (Spegele & Abkowitz, 2016). With the promotion of BRI, these digital platforms have pushed their way further abroad to help the Chinese steel industry sell to external markets. Zhaogang.com, one of the largest business-to-business online steel trading platforms in China, announced that it had started setting up foreign branches in 2015 and would continue to expand its sales networks across the BRI route to help Chinese steel companies export excess capacity (Y. Zhao, 2017).

Probably for these reasons, many digital infrastructures have been laid alongside transport and energy projects. The China-Pakistan Economic Corridor provides an emblematic case. Widely regarded as one of BRI's exemplar projects, the proposed corridor is expected to connect Kashgar in west China with the Port of Gwadar in Pakistan, with a foremost aim to secure an alternative route for China's energy supply by circumventing the unstable Strait of Malacca in Southeast Asia. In 2015, President Xi visited Pakistan and signed more than 30 BRI-related deals, including projects involving not only energy and high-speed

railways but also digital networks, such as a fiber-optic cable built by Huawei and a digital TV system built by ZTE (Haider, 2015; ZTE, 2017). A China–Pakistan information corridor was also proposed in the same year to complement the economic corridor, including efforts to construct a basic information-exchange platform, improve cross-border e-commerce, and develop digital investment and financing service (Y. Shen, 2015).

In sum, one of the primary aims of BRI is to cut excess industrial capacity that has characterized China's investment and export-driven developmental model since the late 1970s. As both the pioneer and the foundation of this model, China's Internet companies have been assigned critical positions in addressing this problem. At the same time, they have been trying to figure out how they can secure a part of this massive investment plan, which is backed by significant state funding and political support. Can the increased alliance between the objectives of the state and those of its digital companies eventually produce positive outcomes for the global and Chinese economies? While BRI—a large infrastructure building program—has the potential to partly absorb China's excess industrial capacity, it could also exacerbate the existing problem, because the grand, ambitious—and often ambiguous—focus of BRI will likely retrigger massive infrastructure investments on both the central and local government levels (Cai, 2017; Yu, 2017). Chinese Internet companies, in collaboration with homegrown traditional industry players, have scrambled to compete for cheap BRI credits by claiming their intention and ability to cut industrial overcapacity. However, the successful implementation of these projects depends not only on China's own political and financial capacity—which is already under pressure—but also on the swiftly altering global geopolitical-economic power structure.

Enabling "Going Out 2.0": Borrowing the Boat to Reach the Sea

Apart from serving both pioneering and fundamental roles to cut overcapacity in traditional industries, a digital Silk Road is also expected to function as an enabling infrastructure to help other Chinese companies go overseas. The Chinese policy discourse often refers to this strategy as "borrowing the boat to reach the sea" (State Council, 2015b, para. 21).

As many analysts have pointed out, in many ways BRI is not a new policy but a continued and updated version of the "going out" initiative promulgated by the administration of Jiang Zemin and Zhu Rongji in the early 2000s (Johnson, 2016; Rolland, 2017). As an important complement to the former "attracting in" policy, which aims to draw foreign capital, "going out" aims to cultivate a friendly international environment for Chinese corporations to go global in order to foster a group of internationally competitive "national champions." As a renewed effort to this long-standing policy initiative, BRI has expanded the geographical range, organized specific policy funds, and coordinated an extensive network of resources for corporate China to go global. Indeed, under the policy banner of BRI, going out has entered the 2.0 stage.

Meanwhile, with the growing importance of the Internet in both the Chinese and global economies after the 2008 crisis (Schiller, 2014), Internet companies have been assigned a new role in this going out 2.0. In July 2015, the State Council released an "action plan" on the new "Internet Plus" policy, not only raising the Internet to the top level of China's national strategy but also strongly urging its indigenous digital

firms to complement other industries, including manufacturing and finance, in their overseas ventures. In particular, it encouraged those firms to build globally competitive application platforms to offer Internet service such as cloud computing and big data analysis, to both Chinese and global businesses (State Council, 2015a).

The arrangement of Alibaba's overseas data centers offers an interesting case to examine the enabling role of digital infrastructure in corporate China's global expansion. To support its core business on e-commerce that requires massive computing power, Alibaba started its own cloud computing arm, Alibaba Cloud, in 2009. It quickly expanded internationally, building data centers in Dubai, Frankfurt, and Sydney. The Belt and Road Initiative has offered a major boost to Alibaba Cloud's business development. In April 2017, Alibaba Cloud reported that in the past fiscal year, its service had grown over 400% in overseas markets, with a strong focus in major BRI countries. In particular, the company's vice president suggests that the overseas expansion of Alibaba's data centers has served the purpose of "paving the road and building the bridge" (para. 3) for other Chinese companies in their overseas operations, especially software companies (Yi, 2017). By enabling these companies to exchange digital resources and software as on-demand online applications, Alibaba Cloud claimed its importance in helping members of its home team save significant logistical and operational costs. In 2017, Alibaba announced its plan to open three new data centers in India, Indonesia, and Malaysia in 2018, all of which are considered key countries in BRI (Riccio, 2017).

In addition to enabling computing infrastructure, Internet firms can export China-owned technical standards, which has become an increasingly important factor in the going out program as the leadership seeks to upgrade China's industrial structure. Because of the economies of scale of the Internet, proprietary network standards will not only generate considerable royalties but also serve as a boost to help related equipment makers gain significant market share both at home and abroad. This has become especially meaningful with the development of BRI given the vast geographic area it aims to cover. China Mobile, which has been assigned as the single major carrier of China's indigenous third-generation networking standard—TD-SCDMA—and, subsequently, as one of the major carriers of the China-developed 4G/5G TD-LTE standard (Hong, 2017a), understands this point. Xi Guohua, China Mobile's chairman, in his 2015 proposal to the National People's Congress, estimated that in the next five years, the internationalization of TD-LTE networks will generate RMB 400 billion in telecom equipment exports and help a group of Chinese manufacturers and suppliers, from system vendors to chip suppliers, become globally competitive players (G. Xi, 2015). For this reason, and probably also to serve its own business needs, China Mobile has been actively promoting the globalization of TD-LTE, especially in the BRI regions. In 2017, the company reported that 53 countries and regions were rolling out 99 TD-LTE networks; of these, 39 TD-LTE networks from 21 countries and regions are along the BRI routes (China Mobile, 2017).

Riding the tide of the Belt and Road Initiative—an updated version of the going out policies in the early 2000s—the Chinese Internet industry has actively promoted itself as a "boat" to help other Chinese companies when they venture out. Under the policy discourse of building a digital Silk Road, the state also strongly encourages its homegrown Internet companies to complement other team members in conquering foreign markets, given the growing importance of digital technologies in the contemporary global economy. The state's capacity to coordinate and command an increasingly internationalized corporate team in realizing

a unified Chinese strategy, however, should not be overestimated. The well-known fierce competition between Huawei and ZTE in the European market offers an illustration of this point (Guo & Yan, 2011).

Supporting the Internationalization of the Renminbi

Along with the rise of BRI in China's international strategy, Beijing has been busy establishing a new group of international financial entities, including the BRICS (Brazil, Russia, India, China, and South Africa) Bank, the Asia Infrastructure Investment Bank, the New Development Bank, and the Silk Road Fund. Backed by considerable financial commitments from the state—for instance, China injected \$50 billion to the Asia Infrastructure Investment Bank and \$40 billion to the Silk Road Fund—they represent a "Chinese answer" to U.S.-led financial institutions such as the International Monetary Fund and the World Bank, which have dominated the global financial system since after World War II (Wen et al., 2017).

Behind these institutional setups has been the rise of China's financial power. In 2016, China was one of the world's leading sources of foreign direct investment, with \$183 billion capital outflows, ranking second only to the United States (United Nations Conference on Trade and Development, 2017, p. 54). With more than \$3 trillion foreign exchange reserve at hand and, indeed, as the "world's largest capital-surplus economy" (p. 1) this trend is estimated to continue (Salidjanova, 2011). BRI thus offers a new investment outlet to preserve and increase the value of this huge pool of surplus capital. In particular, both to avoid the vicissitudes of external financial markets in the wake of the 2008 economic crisis and to respond to the growing international ambitions of its domestic banks, China has listed the internationalization of the renminbi as one of the top priorities of BRI (Rolland, 2017, pp. 104–108). In particular, BRI is expected to serve as a stimulus for the global use of the Chinese currency through related international transactions and infrastructure investments.

The global financial system, through which banks and corporations exchange millions of pieces of financial data every day, has been enabled by massive transnational telecom networks since the 1960s and was largely dominated by U.S.-led or -controlled institutions (Schiller, 2014). It is in this regard that China also needs a digital Silk Road—as a transnational financial data network—to improve the global circulation of its own currency and to gain power over this strategic infrastructure. Its great strides in the development of the Cross-border Interbank Payment System (CIPS), as a parallel and/or an alternative to the U.S.-led Society for Worldwide Interbank Financial Telecommunications system, illustrates the critical financial dimension of the digital Silk Road. As a China-centered international financial clearing system, CIPS is expected to promote the cross-border transactions denominated in renminbi, help China gain authority over the global system of international clearing as well as mitigate related surveillance risks—a problem made public by Edward Snowden's revelations. As Hu Xiaolian, president of the Export-Import Bank of China, explained, CIPS is the "worldwide payment superhighway" that "will accelerate the internationalization of the RMB" (Xinhua, 2015, para. 6).

Chinese Internet companies soon seized this opportunity. Many hope that aligning their business model with the priorities of the state will help them secure related financial and regulatory resources. For example, Beijing-based IZP Technologies, an emerging big data company with an extremely convoluted and opaque background, has created a cross-border payment and settlement network called Globebill to allow

countries along the Belt and Road Initiative route to carry out direct liquidation between renminbi and their local currencies, bypassing the U.S. dollar as the intermediary. In 2015, IZP reported that it was eligible to issue credit cards and deliver settlement in 30 BRI countries, reaching agreements with financial service providers and central banks in countries such as Belgian, Lithuania, and Saudi Arabia. IZP's BRI-oriented business model seems to have won significant diplomatic support from the state. For example, the company's chief executive officer accompanied Premier Li's visit to Belgium in 2015 and signed an agreement with Belgian service provider Cnext to issue a euro-renminbi dual-currency credit card (Dai, 2015; Rolland, 2017).

China's efforts to build a renminbi-centered global financial system, underpinned by a transnational digital system under its control, however, might be constrained by its long-term technological dependence on transnational IT companies at home. As Peter Nolan (2012) points out, U.S. high-tech companies such as IBM and Oracle have long occupied the commanding heights of China's banking industry, and "once giant customers have bought IBM's mainframes as the foundation of their data system, it is difficult to move to another system" (pp. 118–119). Under the policy banner of "Internet security" and "indigenous innovation" (Y. Z. Zhao, 2010), a few Chinese IT companies, such as Inspur Group, have challenged the dominance of IBM in China's financial sector by offering their own indigenous servers. The astronomical replacement costs as well as the industry's high requirement for transaction stability and speed, however, have made this process slow and bumpy, which might undermine the effectiveness of China's efforts to erect an alternative digital financial system globally.

Constructing a China-Centered Transnational Network Infrastructure

Geo-economic and financial considerations constitute only one dimension of the digital Silk Road. For the Chinese leadership, transnational Internet infrastructure also bears strategic importance for states to expand their geopolitical influence. As historian Daniel Headrick (1981) has documented, in the early history of international communications, the control of telegraph cable networks was vital for the expansion of British colonial power, because the military and diplomatic secrets carried by cables were susceptible to surveillance when passing through foreign territory. Despite the popular perception of cyberspace as "virtual" and "boundless," physical and vulnerable submarine cables actually carry the majority of transnational data traffic, complemented by terrestrial cables and satellite links (Starosielski, 2015). These lifelines of today's digital economy are both highly geographically concentrated and largely dominated by U.S. power, which has sparked serious concerns over data security. For example, after Edward Snowden disclosed that spy agencies were obtaining data from cables as part of their global surveillance program, a BRICS cable was proposed to link Russia to Brazil via China, India, and South Africa, with an aim to circumvent the data hubs in the United States and Europe, through which most data traffic among BRICS countries at present must pass (Y. Z. Zhao, 2015).

The BRICS cable has not been successfully implemented—largely due to internal conflicts among BRICS countries as well as domestic economic challenges (Aouragh & Chakravartty, 2016). Under the digital Silk Road framework, however, China initiated its own transnational network infrastructure through submarine, terrestrial, and satellite links, primarily alongside the Belt and Road Initiative countries.

In the area of submarine cables, recent data indicate that from 2012 to 2015, Chinese firms participated in merely 7% of transnational undersea cable projects, and between 2016 and 2019, this number is expected to increase to 20% (Lee, 2017). The three big state-owned network operators—China Telecom, China Mobile, and China Unicom—for example, have participated in the consortium of the new SeaMeWe-5 submarine cable that connects Southeast Asia, the Middle East, and West Europe. In a news release, China Telecom (2014) claimed that the SeaMeWe-5 cable coordinates well with its currently owned Southeast Asia Japan Cable and Asia Pacific Cable Network 2 systems, further serving the aim of “building a global information highway with China at its core” (para. 3).

In addition to submarine cables, terrestrial fiber-optic cables that interconnect Asia from inside constitute another important dimension of a China-centered global network system. One primary project under construction is the China–Pakistan fiber-optic cable that was officially launched in May 2016 as part of the large terrestrial trans-Eurasian network envisioned by the digital Silk Road plan. With a \$44 million concessional loan from China’s Exim Bank as well as telecom equipment provided by Huawei, this terrestrial cable is intended to link Pakistan to China and from there to Central Asian states and Europe (Xu, 2016). Given that Pakistan is currently linked to the outside through only four undersea cables, the new terrestrial-based cable is anticipated to significantly improve the Internet connectivity of Pakistan—and also help China circumvent the crowded and unstable Strait of Malacca choke point to realize alternative global connection.

Moreover, China has expanded its influence and control over transnational network infrastructures through the active promotion of its indigenous satellite system Beidou—an alternative navigation service to the U.S.-based Global Positioning System (GPS)—first and foremost alongside the Belt and Road Initiative. In June 2016, the State Council Information Office (2016) released a white paper that set the aims of offering Beidou’s basic navigation services to major BRI countries by 2018 and achieving global coverage in 2020. Since 2013, China has reached a series of agreements with several BRI countries, including Thailand, Brunei, Laos, and Pakistan, to promote the use of Beidou in their government and military departments. Apart from economic considerations such as building a strong domestic satellite navigation industry, the primary aim of Beidou, as a research report to the U.S.–China Economic and Security Review Commission points out, is to “address national security requirements by ending military reliance on GPS” (Wilson, 2017, p. 2).

It seems clear that the construction of a China-centered digital Silk Road that ties neighboring countries more closely to China through submarine, terrestrial, and satellite links has become a critical component of BRI. While the expansion of a China-centered transnational telecom infrastructure will improve data security, add redundancy, and advance China’s geopolitical influence (Rolland, 2015), it may also impose a significant financial burden on the incumbent Chinese carriers, given the large cost of building and maintaining these transnational networks and the long return on investment. Although the state continues to hold significant power over its network operators through both ownership and personnel control, their underlying corporate structure and internationally diversified financing model through global stock markets also subject them—though to a limited extent—to transnational market pressure (Wójcik & Camilleri, 2015), which might create tensions in their relationship with the central state.

Promoting an Internet-Enabled Inclusive Globalization

A final feature of the digital Silk Road that is often ignored by analysts is its ideological dimension, which I refer to as an Internet-enabled “inclusive globalization.” Indeed, BRI was formulated at a particularly twisted moment. President Trump’s rejection of the Trans-Pacific Partnership and his “America first” rhetoric supplied an opening for BRI to assume a wider strategic significance, because they helped China proclaim that it would hold up global free trade even if the United States backed away. According to BRI’s “Vision and Actions” published in 2015, the initiative is to—precisely—“uphold the global free trade regime in the spirit of open regional cooperation by promoting a free flow of economic factors” (National Development and Reform Commission, People’s Republic of China, 2015, para. 4). Indeed, Beijing has been busy pushing forward a number of regional free trade pacts as well as signing new trade agreements with countries and regions covered by BRI. In 2017, China was a signatory to 15 free trade agreements, covering 11 countries and regions along the BRI routes, with a plan to extend such agreements with more than 20 BRI countries and regions in the near future (Ministry of Commerce, 2017). In his opening plenary at Davos in January 2017, President Xi made it clear that China will be a firm advocator of “economic globalization” in the decades to come and emphasized “the necessity to make the process . . . more invigorated, more inclusive and more sustainable” (J. Xi, 2017, para. 13).

What this more invigorated, inclusive, and sustainable globalization means, however, remains far from clear. Probably as a manifestation of the complexity of China’s own transnationalization process, the discussion of this inclusive globalization through BRI has been extremely rich and complicated in domestic discourse (China Business News, 2017; Liu, 2017; Swaine, 2015). It is beyond the scope of this article to fully discuss its different, ambiguous, and often competing dimensions. However, for the sake of the discussion here, it is important to point out that Internet technologies—under the banner of promoting connectivity—have also in some way secured a central position in this ideological dimension of BRI, accompanying the rise of China’s Internet industry in both the domestic and global economies. In an article published in *Red Flag Manuscript*, the influential party journal managed by the Central Committee of the Chinese Communist Party, Wang Yiwei, a professor in the School of International Studies at Renmin University, divided the history of globalization into three phases: Globalization 1.0 was led by the ancient Silk Road; globalization 2.0 was dominated by Western colonial and industrial powers; and China’s Belt and Road Initiative has opened up the third period of inclusive globalization, with Internet technologies such as big data and smart cities efficiently connecting landlocked and developing countries to the global economy through a more inclusive international trade and investment system (Wang, 2016). Digital technologies, touted as a connecting and empowering infrastructure for landlocked states and developing nations, have thus been regarded as an important enabling tool in this China-led inclusive globalization. And, as might be expected, Chinese Internet firms have been busy to offer their support to and seek a place in this grand policy discourse, because trade and investment liberalization will also benefit their business development enormously.

Alibaba’s effort to construct an Electronic World Trade Platform (eWTP) in the framework of building an e-commerce Silk Road offers an illustration of where the state’s political and strategic aims converge with its Internet firms’ economic drivers. In 2016, chairing the B20 SME Development Taskforce, a business advisory group to the G20 meeting, Alibaba’s chairman Jack Ma proposed the idea of building an Electronic

World Trade Platform. The proposal received almost immediate political support from the Chinese leadership and was later incorporated into the G20 Leaders' Communique Hangzhou Summit. Different from the current global free trade regime that privileges big businesses, eWTP, as a "logical and natural complement to the WTO," is claimed to serve the interests of small and medium-sized enterprises (SMEs) in developing countries through Internet-enabled logistics, payments, and financing services—all of which are core businesses of the Alibaba Group (Alibaba Group, 2016, para. 7). As a manifestation of the eWTP, in March 2017, Alibaba's first global digital free trade zone was launched in Malaysia; it consisted of a regional logistics center serving Southeast Asia, an accompanying e-commerce platform, and a digital payment and finance service. Along with Prime Minister Datuk Seri Najib Razak, Ma attended the opening ceremony and skillfully linked his eWTP proposal to China's Belt and Road Initiative, claiming that, "for human beings the first globalization was the Silk Road . . . today in the Internet [age], I think we should transfer the Silk Road to an e-road" (Jaipragas, 2017, para. 6).

Yet the promotion of global trade and investment liberalization in and through the Internet sector will likely conflict with China's own protective Internet policies, including a recently passed cybersecurity law, which might trigger pressure from some of China's now highly internationalized Internet firms. For example, a Huawei executive openly expressed his concerns about the trade implications of China's new information security laws, worrying that the protective policies will cause negative effects on global trade openness and on Huawei's own internationalization strategies (Shih, 2015). With the growing importance of overseas markets in China-based Internet firms' profit strategy—for example, in 2008, Huawei's overseas revenues accounted for a historical high of 75% of its total revenue—there might be reason to expect that other Chinese companies will share Huawei's concerns.

Discussion and Conclusion

The Belt and Road Initiative, as the hallmark policy of the Xi-Li administration, has set a multitude of ambitious objectives, opening a new phase of China's incorporation into global capitalism. Crucially, under the policy banner of building a digital Silk Road, China's now-potent Internet companies—from equipment vendors and network operators to Web services and application providers—have both been assigned and actively sought a central position in this enormous statist undertaking. Although the grand and complicated objectives of BRI have received much well-deserved scholarly attention, how the initiative is connected with China's thriving Internet industry—the most dynamic sector in both the Chinese and global economy—has been less well discussed. This article, first and foremost, offers a broad overview of BRI in its digital and information dimension and clarifies the multifaceted role that has been assigned to, or claimed by, Chinese Internet companies in this massive initiative.

In China's policy discourse, a digital Silk Road has five major dimensions. The state hopes that assigning its native digital players a prominent role in BRI can mitigate industrial overcapacity, facilitate other Chinese firms' global expansion, support the internationalization of the renminbi, construct a China-centered transnational network infrastructure, and promote an Internet-enabled inclusive globalization. Chinese Internet companies, on the other hand, have also actively participated in this state-led initiative, viewing it as an opportunity to seek political, financial, and diplomatic support for their own business development and global expansion. Despite a growing alliance between the state and Internet companies

in the construction of a digital Silk Road, the complex interactions between state initiatives and business imperatives continue to create tensions and conflicts.

First, although the digital Silk Road has the potential to cut industrial capacity, open up new external markets, and reorganize transnational trading networks, its sweeping and ambiguous focus is likely to reignite massive infrastructure spending and feed back into the chronic problem of excess capacity. When many Chinese Internet companies have rushed to develop new projects based on the promises of state subsidies, the successful implementation of many digital BRI projects, however, cannot be assumed. Second, while digital infrastructures and network applications can be employed to function as an enabling infrastructure to help other Chinese businesses go overseas, the state's capacity to command this increasingly internationalized corporate arm should not be overestimated. Third, it is true that Beijing has put forward serious efforts to erect an alternative transnational financial telecom system to support the greater use of its own currency, but the entrenched role of foreign IT firms in China's strategic banking and finance industry might undermine this statist agenda. Fourth, while Chinese carriers have been mobilized to shoulder the responsibility of building a China-centered transnational network infrastructure, the massive construction and maintenance cost and long return on investment might also conflict with these companies' profit-oriented business structure. Finally, China's attempts to promote itself as a new champion of an Internet-enabled inclusive globalization are also likely to provoke frictions with its own protective cyber policies, which might trigger pressure from its now highly internationalized Internet firms.

Admittedly, at this early stage of China's BRI development, many of the tensions and conflicts discussed here remain speculative. Drawing on the critical political economy approach and informed by historical evidence, however, this article reminds us that instead of assuming the predominant role of state power, it is important to consider the complexity and instability of state-business alliances as China expands its presence in the global Internet. While the profit maximization interests of China's Internet corporations have increasingly allied and associated with the strategic consideration of the state in building a digital Silk Road, various conflicting points still exist. For example, how different types of Internet capitals, such as state versus private capital, interact differently with the state in the implementation of the BRI is an important question for future research. A digital Silk Road involves dynamic, complex and sometimes unpredictable power relations between different state agencies and various units of capital, which requires sustained, historically specific examination.

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