

## **Huawei Versus the United States? The Geopolitics of Exterritorial Internet Infrastructure**

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The U.S. government's recent indictment on Huawei—the Chinese telecom giant—can be used as a case study to unpack the increasing complexity in global Internet governance. By delineating the history of Huawei's development and encounters in the United States, this article addresses the questions: In what ways and to what extent is the U.S. government using trade sanctions over a Chinese corporation to shape the future of 5G technology? The nature of this case is not much about bilateral trade disputes but, rather, the intensification of the geopolitics surrounding exterritorial Internet infrastructure. Connecting the Huawei case to the historical struggles in global communication order, the study explores implications for the debates in Internet governance concerning the "multistakeholderism" and the role of nation-states.

*Keywords: Huawei, 5G technology, exterritorial Internet infrastructure, information geopolitics, media imperialism*

In December 2018, Meng Wanzhou, chief financial officer of Huawei—a China-based global telecom giant, was arrested by the Canadian police for extradition to the United States (Perlez, 2018). In January 2019, the U.S. Department of Justice decided to charge Meng and Huawei with trade-secret theft, obstruction of a criminal investigation, and violations of the Iran sanctions (Sanger, Benner, & Goldstein, 2019). The Foreign Ministry of China immediately condemned the U.S. government's "unreasonable bashing on Chinese companies" (Geng, 2019, para. 3). In May 2020, a Canadian judge ruled that the U.S. charges against Meng meet the extradition condition, with further hearings scheduled in October (Young, 2020).

Although the case coincided with the U.S.–China trade negotiations, rivalries among information-technology industries in the two countries have been long-standing, exemplified by Huawei's enduring failure to enter the U.S. market and by the company's American counterparts' encounters in China. Controlling information infrastructure is largely a political economy matter (Deibert, 2008; Lips & Koops, 2005; National Committee on American Foreign Policy, 2013).

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Against these backdrops, this article explores the nature of the Huawei case with these questions: What is the U.S. government's goal in this case—defending against a national security threat or something else? How has the next-generation network infrastructure—5G—ratcheted up pressures on Internet governance and information geopolitics? To what extent and in what ways might the contentious history of the global communication order be relevant?

After historicizing the Huawei case in the entanglement of information systems and geopolitics, this article situates the case in the media imperialism discourse and examines its contemporary relevance. This article connects the case to the debate on multistakeholderism versus multilateralism in global Internet governance and reconceptualizes the framework through the role of nation-states. This case is not solely a matter of bilateral trade disputes, but rather about the intensifying geopolitics surrounding global Internet infrastructure—5G technology, in this specific case, where a self-interested logic of neoliberal imperialism surfaces in the U.S. approach that contradicts what it holds as a multistakeholder model in Internet governance.

Methodologically, the study takes a critical political economy approach, drawing on document analysis of primary and secondary sources. It starts with an overview of the United States' use of diplomatic devices—be they political, economic, or military—to steer the global communication system, practices of which some scholars term media imperialism. The article then situates Internet governance in the broader history of struggles in the global information order and examines the key debate on conceptualizing states, followed by a section on the rise of China's digital industries, resulting in increasing intercapital tensions and state efforts in seeking influences on exterritorial Internet. To understand the continuities, changes, and trajectories of these intertwined processes, the Huawei indictment is used as a case study.

### **Global Communication, Geopolitics, and Media Imperialism**

From Britain's dominance on submarine cables in the 19th century and German leaders' ambition to shape world communication through wireless telegraphy news, to the rise of the United States rivaling the United Kingdom over exterritorial networks after World Wars I and II and the early development of the global Internet system, control of global information infrastructures has always been a priority for imperial states (D. Schiller, 2011a; Tworek, 2019). Global media scholars have cast light on the relations between communication and empire of various periods. Boyd-Barrett and Rantanen (1998) examine the role of news agencies in the developments of capitalism and globalization as "an outstanding but neglected feature of the past 150 years" (p. 2). Tworek (2019) takes Germany at the turn of 20th century and especially during and after World War I to explain how it had built a global news network to support "political, economic and military power at home and abroad" (pp. 5–7). Winseck and Pike (2007) further the links between communication and empire, suggesting complicated power axes of nation-states, corporations, and technologies in these processes in the early 20th century.

The U.S. government has long used diplomatic leverage, including trade, to steer communication policies to promote national interests. Hills' (2002, 2007) historical work argues that the history of U.S. imperial expansion is a history of the struggle in controlling the global information network. Guback (1969) illustrated how U.S. foreign policy in the decade post-World War II helped reduce restrictions on American films in Europe and expand Hollywood's overseas markets, thereby sustaining U.S. political interests. Into

the second half of the 20th century, U.S.-based transnational media corporations rose to dominate global cultural industries (Herman & McChesney, 1997; H. Schiller, 1992). Through these processes, a natural alliance between the U.S. state media industries was forged. The overseas expansion of American broadcasting, advertising, and media systems, together with the military, were the pillars of the U.S.'s global dominance (H. Schiller, 1992, p. 37). These highly integrated American media conglomerations also exerted strong influences on U.S. economic and foreign policies to allow their further consolidation and greater media power over other countries (Boyd-Barrett, 2006; Herman & McChesney, 1997, p. 4). This laid the foundation for the media/cultural imperialism paradigm.

Many scholars pinpoint the onset of media imperialism discourse to Herbert Schiller's (1976) study on the relationship between media and the U.S. empire, where he used cultural imperialism to describe

the sum of the processes by which a society is brought into the modern world system and how its dominating stratum is attracted, pressured, forced and sometimes bribed into shaping social institutions to correspond to, or even promote, the values and structures of the dominating center of the system. (p. 9)

In his initial work, Schiller was mostly concerned with the neoliberal expansion of U.S. mass media as a major vehicle to build, maintain, and exercise imperialistic national power. Boyd-Barrett (2015) refined the concept and articulates three key aspects of the multilayered empire-making processes in and through media:

Firstly, processes of imperialism are in various senses executed, promoted, transformed or undermined and resisted by and through media. Secondly, the media themselves, the meanings they produce and distribute and the political-economic processes that sustain them are sculpted by and through ongoing processes of empire building and maintenance, and they carry the residues of empires that once were. Thirdly, there are media behaviors that in and of themselves and without reference to broader or more encompassing frameworks may be considered imperialistic. (p. 1)

With more scholars taking on this concept, media imperialism gradually became a critical discourse encompassing various theories that embrace multifaceted relations between communication systems and imperialism (Boyd-Barrett, 2015; Tomlinson, 2002). Some notable elements in this field of inquiry are the transnational expansion of media corporations, the entanglement of state entities, the rhetorical and narrative vehicle, and the dialectical interrelations among these different parts.

This discourse became a primary intellectual source for the New World Information and Communication Order (NWICO), a series of policy debates that addressed the media and geopolitical struggles in the 1970s between the North and the South (Nordenstreng, 2013). At first a political movement by developing countries to resist cultural imperialism, NWICO evolved into critiques on structural matters of information flow, media policies, and infrastructure governance, which continued at the World Summit on Information Society (WSIS; Chakravarty, 2006).

Since the early 1980s, information and communication technologies (ICT) have developed into new sites of reproduction and control for U.S. imperialism (H. Schiller, 1981, 1984). The neoliberal policies gave birth to an array of U.S.-based ICT monopolies, such as IBM, Cisco, Apple, Microsoft, and Google, which spearheaded U.S. global expansion through proprietary systems of technical standards, patents, and copyright law and through networked cloud computing (McChesney, 2013; D. Schiller, 2014). Meanwhile, a "military-digital complex" (McChesney, 2013, pp. 158–171) has surfaced, assisting the U.S. government with data collection for strategic exterritorial interests (D. Schiller, 2011a). This was evident in the participation of U.S. social networks in the Arab uprisings and with Edward Snowden's revelation of the National Security Agency's global surveillance programs (Aouragh & Chakravartty, 2016; Greenwald, 2014). As Aouragh and Chakravartty (2016) observe, "it is painfully apparent that telecommunications and social media companies alike comply, co-operate and bend to state power—whether Egyptian military regimes or U.S. imperial interests" (p. 565).

The growth of U.S. digital giants as the new engine for geopolitical conquest bear much resemblance to media imperialism. The conflicts over the global communication order, especially the management of Internet infrastructures, are as much alive as in the era of NWICO and WSIS (Nordenstreng, 2013; Pickard, 2007). This study reconceptualizes Internet governance within the longer history of struggles in the global communication systems and benefits from the media imperialism discourse that takes a holistic view of state power and the dialectical relation between the state and private actors.

### **The Debates About Internet Governance**

Internet governance, a field that examines the design, administration, policy discussions, and political economic enactment of technologies to keep the Internet operational, intersects with technical, political, and regulatory processes (DeNardis, 2014, pp. 6–7). For example, "root functions," such as domain name systems (DNS) and Internet protocol (IP) addresses, are "point[s] of centralization" (Mueller, 2002, pp. 6–8) and therefore fundamental political resources to obtain.

Known as networks of networks, the current global Internet originated from a U.S.-based infrastructure by the Department of Defense that logically became the manager of DNS in early days. With the growth of the Internet in the 1990s, the U.S. government transformed its control into the nonprofit, self-governing entity, Internet Corporation for Assigned Names and Numbers (ICANN), which has since been an important unit in global Internet regime (Kruger, 2015). ICANN adopts a multistakeholder approach of policy making, which is, supposedly, an independent and democratic process supporting the free flow of information and equal distribution of governance power across the private sector, governments, and new global institutions (DeNardis, 2014). Contrary to this claim, ICANN was largely a U.S. proxy under the oversight of the Department of Commerce (Mueller, 2002, p. 220). Some scholars discussed the failing role of this global institution and the overt presence of nation-states (Mueller & Thompson, 2004; van Eeten & Mueller, 2012). Concerns over extensive authoritarian surveillance peaked in the wake of Snowden's revelation as the United States gained intelligence advantages in diplomacy, trades, and sensitive global dealings—in many cases with the aid of its corporate actors (Deibert, 2015; Kruger, 2016; McCoy, 2014). U.S. social media giants, such as Facebook and Twitter, controlled the network access and information flow during the Arab spring through platform imperialism—media imperialism in the digital age—that integrated

capitalist expansion and state values (Aouragh & Chakravartty, 2016; Boyd-Barrett, 2006; Jin, 2013; Pickard, 2007). Although ICANN's role in Internet governance is now narrowed, the multistakeholderism, as a historical formation of U.S.-centric hegemonic control on the global information network, is a much-flawed framework.

Under this context, the Global South called for an equal intergovernmental framework (Bhuiyan, 2014, pp. 7–8). Multilateralism was one such response, advocating for stronger national sovereignty over the information network. Challenging the United States' expansive involvement in exterritorial Internet developments and regulations, emerging economies, such as Brazil, China, and India, are exerting increasing influence on key Internet infrastructure assets, including "submarine cables, internet exchange points, autonomous system numbers, and datacenters" (Winseck, 2017, p. 228). The Chinese government has been especially critical of the heavy interference of the U.S. Department of Commerce and VeriSign—the global manager of DNS registry—under multistakeholderism (D. Schiller, 2013; Shen, 2016).

However, if multistakeholderism is synonymous with a transnational capitalist state on the U.S. side, then the multilateralism is, paradoxically, both an opposition to and an imposition of state power, which does not differ so much from an imperialistic logic. The dichotomous rhetoric between multistakeholderism and multilateralism cannot fully capture the nuanced coexisting and very often intertwined relations between state and nonstate agents (Hong & Goodnight, 2019). More important, it is not the role of states that is inflated (van Eeten & Mueller, 2012), but rather the role of the United States. The states in the Global South are overlooked or oversimplified (Bhuiyan, 2014). This article offers a corrective with the political economy tradition that takes a dialectical approach to the roles of states and corporations and is a major point of departure to the existing conceptualization of Internet governance, as the expanded and intensifying geopolitics over exterritorial information infrastructures requires stronger unity between states and corporations and continuities among networked political economies (Hong & Goodnight, 2019; D. Schiller, 2014). Moreover, China's blended economic, political, and cultural dynamics that juxtapose postcolonialism, capitalism, and socialism could enrich the media imperialism literature from a transcultural perspective of the Global South (Y. Zhao, 2011). Huawei is a case study.

### **The Rise of China's ICT Sector**

The rapid development in China's globalized Internet industry since China opened telecommunication and ICT sectors to transnational capitalism is recapped in this section, focusing on the state-driven process and its ramifications to global cybersphere geopolitically (Hong, 2011, 2017a; D. Schiller, 2014; Tang, 2019a; Y. Zhao & Schiller, 2001).

As scholars point out, the notion that China's Internet is an authoritarian sphere disconnected from the world is no longer valid in view of the complex relation between the Chinese state and the market (Di Salvo & Negro, 2015; Y. Zhao, 2011). The state has been a primary driver for China's ICT-centered capitalist growth, shown in studies on China's information policies that embraced capital participation in industrialization (Hong, 2011, 2017a, 2017b; Tang, 2019a, 2019b). The ICT sector became a centerpiece of the nation's strategic restructuring in the wake of the 2008 financial crisis, which exposed the vulnerabilities in China's export-oriented mode of growth and heavy dependence on foreign suppliers. With

respect to information infrastructures, China's homegrown technology was not internationally recognized in the 3G and 4G eras and lacked leadership in setting global technical standards (Hong, 2017a). The transnational supply chain was dominated almost entirely by American corporations, with Cisco in corporate routing equipment, Qualcomm in chipset equipment, Intel in semiconductors, Oracle and Microsoft in business software and operating systems, and Apple in smartphone devices (D. Schiller, 2011b). Realizing this Achilles heel for China, Chinese leaders soon started a national strategy to promote indigenous innovative industries in post crisis rebalancing (Hong, 2011; Y. Zhao, 2010). The ICT sector was "tasked to underpin China's rise as global power and its internal transformation" (Hong, 2017b, p. 1755) in the 12th and 13th Five-Year Plans, serving as compasses for macroplanning in the five-year periods of 2011–15 and 2016–20. The 13th Five-Year Plan named ICTs as the highest priority to catalyze domestic reforms and power the country's ambitions to lead global digital capitalism. The global digital landscape started shifting with China's rising ICT sector. China-based Internet companies including Alibaba, Tencent, Baidu, JD.com, and NetEase became powerful players in transnational capitalism, shaking U.S. dominance (D. Schiller, 2014; Tang, 2019a, 2019b; Yeo, 2016).

Moving from the material to the political and geopolitical, the Chinese state sought greater influence on cyberspace governance (Drissel, 2006; Shen, 2016). In tandem with the actively propagated indigenous innovation initiative, China formulated its policy positions in global Internet governance, which vocally challenges the entrenchment of a U.S.-centric regulatory regime (D. Schiller, 2013; Shen, 2016). Multistakeholderism brings major economic, military, and intelligence benefits to the United States and its allies, but China advocates for a multilateral model to internationalize governance under the United Nations and empower developing countries (Segal, 2018; Shen, 2016). The dual approach—capitalist development on one side and state engagement on the other—represents "a dialectical oscillation" (Hong & Goodnight, 2019, p. 2) of the state and capital and of inward-looking and outward-looking policies.

Cyber sovereignty assumed new urgency in China's current administration, considering Snowden's revelation (Creemers, 2015; McKune & Ahmed, 2018). Proactive changes are made through centralized regulating entities, policy articulations, and strategic initiatives. The Central Leading Group for Internet Security and Informatization, later renamed the Central Cyberspace Affairs Commission, was established in 2014 under the direct leadership of President Xi Jinping and Premier Li Keqiang (Miao, Zhu, & Chen, 2018; Tang, 2019a, pp. 15–16). A cyber sovereignty agenda has been promoted in response to the complex and contested external influences from "supranational entities, corporate infrastructures and networked publics" (Hong & Goodnight, 2019, p. 8; see also Arsene, 2016; Budnitsky & Jia, 2018; Liu, 2012). As an official report asserts, the Internet within Chinese territory is under the jurisdiction of Chinese sovereignty, which should be respected and protected (State Council, 2010). Xi Jinping (2015) further elaborated at the second World Internet Conference, "We should respect the right of individual countries to independently choose their own path of cyber development, model of cyber regulation and Internet public policies, and participate in international cyberspace governance on an equal footing" (para. 8).

To put forward the Internet sovereignty discourse, China works closely with emerging geopolitical units, mostly from historical peripheral and semiperipheral regions, through strategic partnerships, including the Shanghai Cooperation Organization, Wuzhen World Internet Conference, Belt and Road Initiatives, Forum on China-Africa Cooperation, and CyberBRICS (Belli, 2019; McKune & Ahmed, 2018; Shen, 2018).

In these collaborations, the dual approach in expanding Chinese digital industry and building alliances on cyber governance is again visible. China's growing Internet capital and desire to lead an alternative regulatory regime pose double threats to U.S. geopolitical-economic power.

### **Huawei and Its U.S. Dilemma**

Established in 1987 in Shenzhen, China, Huawei is one of the world's largest suppliers of telecom equipment, devices, and services, with operations in 170 countries and regions and sales revenue of US\$123 billion in 2019 (Huawei, 2020a). The company has three major business areas: carrier, enterprise, and consumer. The carrier business focuses on telecom infrastructure, such as 5G operation and maintenance, artificial intelligence (AI) technology, wireless and fixed networks, and cloud computing. The enterprise sector partners with corporations and governments on smart-city construction (Huawei, 2020a). Consumer business features its flagship products of smartphones, PCs, laptops, tablets, and wearables.

The company has invested significantly in research and development (R & D) with US\$18.65 billion in 2019, taking up 15.3% of that year's total revenues (Huawei, 2020a). This makes the company one of the largest R & D spenders in the world, in the range of Samsung, Alphabet, and Microsoft (Gao, 2019). Huawei runs 14 global R & D centers and 36 joint innovation centers. Having started 5G R & D in early 2009 during the height of the 3G to 4G transition, Huawei is one of the earliest to deploy large-scale 5G commercial usage (W. Zhao, 2018).

Globally, Huawei is pioneering telecom equipment and smartphone markets, with 28% and 14.6% of the market, respectively (Pongratz, 2018; Su, 2018). Aside from China, Huawei's major markets include Europe, the Middle East, and Africa (EMEA) and the Asia Pacific Region and Latin America (see Table 1).

**Table 1. Huawei's Revenues by Regions, 2019 (Huawei, 2020a).**

| Regions      | Revenues (US\$ in billions) | Percentage of revenues |
|--------------|-----------------------------|------------------------|
| China        | 71.75                       | 59                     |
| EMEA         | 29.17                       | 24                     |
| Asia Pacific | 9.98                        | 8.2                    |
| Americas     | 7.43                        | 6.1                    |
| Other        | 4.64                        | 2.7                    |

**Table 2. Huawei's Early Global Expansion (Wen, 2017).**

| Year office(s) established | Region/country of office | Target market                |
|----------------------------|--------------------------|------------------------------|
| 1995                       | Hong Kong                | Asia Pacific                 |
| 1997                       | Russia                   | Eastern Europe, Central Asia |
| 1998                       | Kenya                    | Africa                       |
|                            | Yemen                    | Middle East                  |
|                            | Laos                     | Southeast Asia               |
| 1999                       | Brazil                   | Latin America                |

|      |               |               |
|------|---------------|---------------|
| 2000 | Sweden        | Europe        |
| 2001 | United States | North America |

Huawei's global expansion has several characteristics. First, its international frontlines are primarily based in developing areas in Africa and Latin America, through an "encircling developed markets from emerging markets"—borrowing Mao Zedong's famous "encircling cities from the countryside"—strategy (Wen, 2017, p. 108). The established telecom giants, such as Ericsson, Alcatel-Lucent, and Nokia, were reluctant to spare money and effort in building infrastructures for "remote, turbulent regions with adverse natural conditions" (Ren Zhengfei, 2006, as cited in Wen, 2017, p. 111). Huawei saw opportunities and used these underdeveloped regions as entry points into the global market. After gaining a foothold in developing areas, Huawei marched toward the developed market, including Western Europe and North America (see Table 2).

Secondly, the name Huawei, short for "China with achievements" in Mandarin, appeals to Chinese nationalism and crowns a national champion identity, although the company is not state-owned. Huawei, by building telecom infrastructures and providing services in developing countries, served China's geopolitical goals. Government-mediated contracts, in return, supported Huawei's overseas expansion (Wen, 2017, pp. 117–118). However, it was exactly this nationalistic corporate brand that led to Huawei's dilemmas in Western countries. Speculations on whether the Chinese government would access and interfere with Huawei's businesses went so far that the company had to publicly clarify questions about its relation to the state (Huawei, 2020b). Ironically, though Western media erroneously paints Huawei as a Chinese state-military agent, the media often understate the intimate relations between telecom giants and military branches in their own home states, another aspect of media imperialism (Boyd-Barrett, 2015; D. Schiller, 2011a).

In fact, Huawei has been under severe scrutiny by the U.S. government ever since the company became a primary supplier and has encountered many setbacks in the American market (see Table 3). The U.S. government blocked Huawei's deal with 3Com Corporation in 2008 and 3Leaf Systems in 2011. As Wen (2017) notes, "For decades the company has been completely excluded from purchase lists of U.S. top-tier carriers including AT&T, Sprint, T-Mobile and Verizon" (p. 153). To fight for its interests, Huawei, in an open letter to the U.S. government in 2011, called for fair treatment and full investigation to clear its name. In response, the House Permanent Select Committee on Intelligence started an investigation in 2011, which led to a hearing and a final report in 2012. The report insists that Chinese telecommunication companies pose national security threats and urges the U.S. government to "remain vigilant" (U.S. Congress, 2012, p. 45).

The level of U.S. antagonism peaked when Huawei's chief financial officer, Meng Wanzhou, was arrested in December 2018 by the Canadian government, on a U.S. request. The situation escalated and captured media attention worldwide. In January 2019, the U.S. Department of Justice charged Meng and Huawei for trade-secret theft, obstruction of a criminal investigation, and violations of the Iran sanctions. U.S. carrier T-Mobile accused Huawei employees of stealing its design of a phone-testing robot named Tappy. In February 2019, Huawei pleaded not guilty (Levy, 2019). Separately, Meng, if extradited to the United States, would face charges of bank fraud to cover Huawei's businesses with Iran (Sanger et al., 2019). While waiting for hearing(s) to determine her fate, Meng sued the Canadian authorities for what she

considered her unlawful arrest (“Huawei’s Meng,” 2019). In May 2020, the Canadian court ruled that the U.S. charges against Meng satisfied the extradition condition and her case should proceed (Young, 2020).

**Table 3. Huawei’s Landmark Defeats in the United States**

| When           | What happened   |
|----------------|---|
| January 2003   | Cisco System Inc. filed a lawsuit against Huawei for unlawful copying of its intellectual property. The two reached an agreement in July. Cisco dropped the case.                                   |
| February 2008  | Huawei dropped the bid to acquire 3Com Corporation as the U.S. government investigated potential national security risks posed by Huawei’s acquisition.   |
| July 2010      | Huawei lost its bid to buy Motorola’s wireless-equipment unit. Motorola sued Huawei for trade-secret theft.   |
| August 2010    | U.S. lawmakers, in an organized campaign, blocked Huawei’s bid to supply telecommunications equipment to Sprint Nextel.   |
| February 2011  | The U.S. Committee on Foreign Investment did not approve Huawei’s proposed purchase of 3Leaf Systems.   |
| September 2012 | The U.S. House Permanent Select Committee on Intelligence, after a yearlong investigation responding to Huawei’s request for fair treatment, maintained that Huawei and ZTE posed security threats. |

In the meantime, the U.S. government orchestrated an extraordinary outreach campaign among its allies to push Huawei out of the game in next-generation mobile Internet—that is, 5G technology (Woo & O’Keeffe, 2018). Reportedly, the U.S. government warned NATO members, including Germany, Italy, and the United Kingdom, about the risks of using Huawei equipment, threatened a tariff war were they to work with Huawei, and promised greater funding if they drop Huawei businesses (Watkins, 2019). Following a new restriction by the U.S. Department of Commerce in May 2020 on Huawei’s access to chip suppliers, the United Kingdom would stop purchasing Huawei equipment and gradually remove it from Britain’s 5G network (Hille, 2020; “UK to Ban,” 2020).

Although Meng’s arrest coincided with the heated U.S.-China trade war, it is not unprecedented that the United States use diplomatic leverage to ward off competition from foreign players and negotiate benefits for domestic companies, to sustain its shaping force in the global communication systems, and to steer structural decisions (D. Schiller, 2011a, 2011b). Sanctions in 2018 on ZTE Corporation, another Chinese telecom supplier, is one more example. Both cases, related to China’s growing presence in the global ICT battle, shielded U.S.-based Qualcomm, Cisco, and T-Mobile, among others. Concerted rhetoric wars to assist trade battles, as the “China threat” discourse and the unverifiable “backdoor security” issue, are often highlighted in media narratives.

At the same time, Qualcomm, the San Diego-based U.S. chipmaker, has had no easy way in China. In November 2013, China’s National Development and Reform Commission (NDRC), which started an antimonopoly investigation into the company (Clark, 2015), concluded in 2015 that Qualcomm had violated the antimonopoly law, and imposed a penalty. Qualcomm (2015) reached a resolution with the NDRC to modify its business practices in China to satisfy NDRC’s requirements. In April 2018, Qualcomm was caught

in another antitrust investigation, as the Chinese government prolonged its review on the company's plan to acquire the Dutch firm NXP Semiconductors N.V. (Swanson & Stevenson, 2018).

The intensified intercapital rivalry among major global telecom is complicated and mediated by the geopolitical battle in the global communication system. The heavy-handed states from both sides forged alliances with their national champions to advance national geopolitical-economic interests. This has catalyzed a more dialectical relation between transnational states and corporate entities in securing control over the global Internet infrastructure.

### **5G and China's Exterritorial Ambition**

The fifth-generation technology (namely, 5G) is the upgrading of telecom, mobile, and Internet infrastructure from the current 4G LTE (long-term evolution)-based network. In addition to enhancing network capacity, 5G facilitates emerging communication technologies, such as the Internet of Things, machine-to-machine applications, and smart networks (Le et al., 2015; Thompson et al., 2014). As a critical information infrastructure for next decade, 5G is concerned with multilayered governance issues of standards, architecture arrangements, infrastructure administration, information flow, security, and privacy, where new patterns of dominance and dependency are likely to emerge (see Table 4 and 5).

***Table 4. 5G Technology Issues (U.S. Congressional Research Service, 2019).***

| Issue                 | Content  | Participating entities   |
|-----------------------|--|--|
| Standards             | Technical specifications and performance requirements for networks, equipment, and devices in regional or global markets | United Nations International Telecommunications Union (ITU); 3rd Generation Partnership Project (3GPP) |
| Spectrum use          | Higher frequencies for higher bandwidth and throughput; common spectrum for cross-network communications                 | ITU; national spectrum-management agencies; industries   |
| Equipment and devices | Compatible 5G equipment and devices required for full deployment of the network  | Manufacturers  |
| Security              | Network and information security concerns all above elements   | Nation states; corporations  |

***Table 5. Major Global Players in 5G Technology.***

| Region/country | Related corporate parties      | Reported development   |
|----------------|--------------------------------|--|
| South Korea    | Korea Telecom (KT); SK Telecom | Commercial services started in April 2019.                                       |
| China          | China Mobile; Huawei           | The country officially kicked off 5G commercial use in 2019.                     |
| United States  | AT&T; Verizon; T-Mobile.       | The first 5G smartphone was launched in 19 cities in 2019.                       |
| European Union | Ericsson; Swisscom; Vodafone   | The first large-scale commercial 5G network was launched in Switzerland in 2019. |

China, reflecting on the strategic importance of this ICT development like other major political-economic powers, is determined to lead the game. In the 2018 government report, Premier Li Keqiang highlights that China must be on board with the latest global revolution in science and technology and industrial transformation (K. Li, 2018). In 2019, Li Keqiang reiterated the resolution to speed up the growth of emerging industries by strengthening R & D and by the application of big data and AI technologies; fostering clusters of emerging industries, such as next-generation information technology and high-end equipment; and expanding the digital economy (K. Li, 2019).

The first mention of 5G appears in a 2015 central government's report when the State Council (2015) issued the Made in China 2025 strategic initiative. Made in China 2025 is a 10-year guideline for building China's indigenous manufacturing industries and spearheading the ICT infrastructures. Key aspects for the next-generation technology development, such as semiconductor chips for 5G, quantum computing, and neural networks, are recognized as breakthrough areas (State Council, 2015). Although promoted primarily for domestic restructuring, Made in China 2025 has been interpreted by the West as an ambitious declaration to challenge the West's dominance in the global technology sector (Laskai, 2018). The 13th Five-Year Plan (State Council, 2016) upgraded 5G to a key technology for information network with strategic importance. The next two years' government reports further articulate this (see Table 6). A 2018 Deloitte report claims that China's plan to invest US\$400 billion in 5G-related technology development and infrastructure construction exceeds U.S. expenses in wireless communications infrastructure "by approximately [US]\$24 billion" (Littmann, Wilson, Wigginton, Haan, & Fritz, 2018).

With these enabling policies, national champions, such as China Mobile, China Telecom, Huawei, and ZTE, are the front-runners in steering 5G projects. In February 2013, China's NDRC, the Ministry of Industry and Information Technology, and the Ministry of Science and Technology—all ministerial-level state entities—jointly established the IMT-2020 (5G) Promotion Group (IMT-2020) as the central oversight team to promote 5G R & D (IMT-2020, 2013). The IMT-2020 taskforce includes experts from central academic institutions and major operators and vendors. All three traditional telecom carriers—China Mobile, China Telecom, and China Unicom—have started their technical preparations for 5G deployment (Perez & Li, 2016). Under IMT-2020 coordination, the 5G R & D trial was formally launched in January 2016 and later issued the certifications to seven domestic and international participants (IMT-2020, 2016). In the second-stage research trial, Huawei piloted a first 5G radio test field in Huairou District in Beijing (IMT-2020, 2017).

**Table 6. Chinese State Documents Mentioning 5G.**

| Year | Document title                       | Contents  |
|------|--------------------------------------|---|
| 2015 | Made in China 2025                   | Next-Generation Information Technology Industry: To make comprehensive breakthroughs in the 5G technology, routing switching technology, ultra-high-speed and large-capacity optical transmission, and core technology and architecture of future networks.   |
| 2015 | 13th Five-Year Plan (2016–20)        | Development of Strategic Emerging Industries: Foster artificial intelligence, intelligent hardware, new display technologies, smart mobile terminals, 5G mobile communications, advanced sensors, and wearable devices into becoming new areas of growth.<br>New Information Network Technology: We will drive forward research in key technologies for 5G mobile networks and ultra-wideband applications and develop commercial applications of 5G technology. We will adopt a forward-thinking approach in planning for the next generation Internet and move to upgrade to IPv6 across the board. |
| 2017 | Report on the Work of the Government | We will fully implement our plan for developing strategic emerging industries. We will accelerate R & D on and commercialization of new materials, new energy, artificial intelligence, integrated circuits, biopharmacy, 5G mobile communications, and other technologies, and develop industrial clusters in these fields.  |
| 2018 | Report on the Work of the Government | We will promote the development of integrated circuits, 5G mobile communications, aircraft engines, new-energy vehicles, and new materials, launch an initiative to shore up weaknesses in major equipment manufacturing, develop industrial Internet of Things platforms, and create Made in China 2025 demonstration zones.   |

Huawei started 5G research with an internal R & D project called Vision2020 in as early as 2010 when 4G technology was about to be fully operationalized (W. Zhao, 2018). According to the company's chief 5G scientist, Huawei was among the first to invest in 5G R & D with US\$600 million since the end of 2012. In January 2019, amid its U.S. drama, Huawei announced the successful development of in-house 5G-compatible chipset—Balong 5000—half a year ahead of its timetable (Strumpf, 2019). Qualcomm had achieved this technology one year before. Qualcomm having been its top equipment-components supplier for years, Huawei's accomplishment in chipset would help to secure the company's lifeline from the increasing backlash from the U.S. government and consolidate its control on 5G networks (Huawei, 2019). As of early 2020, the company claims to have landed 91 contracts, 47 from Europe (L. Li & Cheng, 2020). On the device aspect, Huawei, the second-largest global smartphone provider, unveiled the plan for high-

quality but relatively inexpensive 5G phones for US\$600 each (Lucas, 2019). This brought a toe-to-toe competition with other smartphone makers, such as Apple and Samsung, as Huawei's proposed price is almost half of the competition's expected price for 5G handsets. Huawei also actively participated in the international deliberation on 5G standard setting. Its chief scientist of future networks, Richard Li, is the chairman of ITU's Focus Group on Technologies for Network 2030, a collaborative team with leading members from China, Russia, Japan, and the United States to study network-capability development for 2030 (International Telecommunications Union, 2018).

Huawei's expansion across the entire 5G supply chain not only signifies a rising transnational corporation in the global information industry but also parallels China's desire to lead the extraterritorial expansion of next-generation technology, which is driven by both domestic and global factors. Internally, as discussed earlier, China has been experiencing a critical restructuring, pivoting on ICTs. Predictions have been that direct economic output from 5G industries would be RMB 6.3 trillion (US\$939 billion), generating about RMB 2.9 trillion (US\$432 billion) economic value added and 8 million employment opportunities (China Academy of Information and Communications Technology, 2017). Externally, facing mounting pressures from the United States, China must look for other geopolitical-economic collaborators—namely, a diversifying strategy (Watkins, 2019). The unfolding Belt and Road Initiatives is one attempt to extend China's digital influence into trans-Eurasian and Southeast Asian countries, with the Forum on China-Africa Cooperation being another venue for trade partnership and infrastructure connectivity ("Full Text," 2018; Shen, 2018). To advance 5G technology is a continuation of these rebalancing plans: to reduce the long-standing heavy reliance on suppliers as the country's soft underbelly, to boost domestic economy through 5G-related industries, to become a major stakeholder in global supply chain, and to lead governance discussions.

On the other side of the Pacific Ocean, despite of a national acknowledgment of 5G's strategic importance, there seems to be a lack of national champions to wage this battle. Although President Barack Obama once announced a US\$400 million research initiative to fund large-scale 5G tests, progress has stalled since 2017 (Coldewey, 2018). It was not until three years into his term that President Donald J. Trump (2019) officially introduced a 5G initiative. ICANN has not fully addressed the 5G matter, either. This adds more uncertainty to the Huawei case: How will it unfold? Will the United States continue using trade leverage to police the global 5G infrastructure? How will China and other nation-states respond? When the state-driven 5G ambition is contained by state-led trade sanctions in the name of national security, what will it mean to Internet governance? As of this writing, the U.S. response to challenges from emerging economies and their rising digital sectors, especially in the upcoming 5G battle is unclear, apart from pressuring external competitors.

### **Discussion and Conclusion**

This article clarifies the geopolitical nature of the Huawei case by situating it in the broader contexts of global Internet governance with a focus on the undercurrent of geopolitics and imperialism. Beyond the tightening trade conflicts between two global economies on the surface, the long-standing geopolitical battle over the global information infrastructure is at play. The analysis here reveals a history of continual struggles in the global communication order, in which the South strives to challenge the Western power in global information systems and seeks a place in the regulatory regime.

The U.S. use of diplomatic policies, whether political, economic, trade, or cultural, to control global media industries and to police international communication structure has been consistent from the motion-picture era into the digital age. Efforts through trade sanctions to contain Huawei's development and thus China's potential control on the global 5G infrastructure carry an inherent imperialistic logic, which reveals the inadequacy of the existing Internet governance framework. That the U.S. government would go this far—that is, to maintain its hegemony in informational geopolitics by exerting exterritorial power and forcing foreign states to take judicial actions against a single person and a company—suggests the paramount power of an imperialistic state over other actors. This is the exact opposite to what multistakeholderism purports to uphold. The extent this framework can sufficiently explicate the American government's actions on Huawei is questionable. At the same time, the state-driven ICT globalization in China and the rise of Huawei in leading 5G could not be fully captured by a single multilateral model. The Huawei case is most emblematic of the contending role of states—an incipient breakdown of the current governance approach—be it multistakeholderism or multilateralism, as the world's two most powerful nations are both able to fiercely use state power to shepherd infrastructure building. Neither is the Huawei case a simple intercapital rivalry matter. The state-capital relation is more dynamic and fluid in the geopolitics of next-generation ICT infrastructure, which suggests the need for alternative framework(s) in global Internet governance.

Adopting the political economy approach with a transcultural perspective, this article argues that the media imperialism discourse is as relevant today as it was 40 years ago to explain the entanglements of state, capital, geopolitics, and global communication order. Instead of looking at Huawei as the battlefield, the real battlefield is 5G technology, where ferocious clashes are about to (if not already) break out. Who gets to control the standard and spectrum for the global 5G network? Who will become the leading supplier(s) for the transnational 5G value chain? How will national governments manage and share 5G access? If it is not Huawei and if it were not for the standoff between the United States and China, it is likely to be just another company or nation under the siege of those dominant powers.

To answer the questions raised at the beginning, the real issue at stake is not whether Huawei posed (or poses) a national security threat to the United States, but rather whether China is truly able to advance its influences over the global 5G supply chain to challenge the U.S.-centric governance architecture. How will China's state-driven 5G ambition play out? Will China be able to successfully use the 5G battle as a vehicle to rebalance the global information order, an unfinished task from NWICO and WSIS? If successful, how might China's position in global governance institutions change (or not)? Under what principles and with what impact will Huawei, or any other Chinese digital giants, provide services to their Global South "brothers and sisters"? Could this Huawei-versus-the-United-States fight be a critical juncture to imagine an alternative vision for a collaborative and equal model of building information systems that differ from neoliberal imperialism? Or, is having a capitalist transnational corporation combat the United States the only way to challenge the existing global communication order? Global geopolitics is changing, not without its patterns, toward a future of greater uncertainties. Although these questions cannot be answered now, the trajectory of the Huawei case and China's 5G initiatives would have a more far-reaching impact on the role of the Global South—both states and capital—in Internet governance than would the bilateral trade relations.

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