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Disrupting the Chinese State: New Actors and New Factors

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Abstract

How does digital technology influence the Chinese state? This paper focuses on two elements that are rapidly transforming the modus operandi of governance. First, it argues that a strategic public-private nexus is forming at the heart of the Party-state, as an increasing symbiosis is developing between the huge private companies that dominate the Chinese internet and the political sphere. Second, it explores how new data-gathering and -processing capabilities, including 'big data', enhance its governing capabilities. Particular attention is given to the social credit system. Unsurprisingly, China's control-oriented government sees this as an attractive opportunity to enhance its ability to monitor the activities of citizens, businesses, and government officials. These two developments, from a central point of view, may counter some of the perennial problems plaguing the Chinese state, including centre-periphery fragmentation and stunted information flows between government actors. Nevertheless, existing pathologies will likely be reproduced in the digital space.

Keywords

social credit – China – public-private cooperation – social control – big data

1 Introduction

Since Xi Jinping took over as general secretary of the Chinese Communist Party (CCP) in 2012, the role of information and communication technologies (ICT) in governing social, economic, and political life has grown considerably. The Chinese leadership has both reorganized its internet governance structures

and promulgated a range of ambitious policy initiatives aimed to drastically expand the role of ICT in all aspects of social, economic, and political life (Creemers 2015). This agenda of ‘informatization’ (*xinxihua* 信息化) seeks to leverage the potential of ICT to assist in countering a plethora of challenges that the Chinese leadership faces, ranging from stagnating economic growth to enhancing public services and delivering better governance and to dealing with official corruption and abuse. Its growing importance is underlined by the creation of a Central Leading Group, later consolidated into a commission under the Party’s Central Committee, chaired by Xi personally, to coordinate cybersecurity and informatization efforts. These moves intend to increase the government’s ability not merely to circulate information it already possesses but also to gain access to new sorts of data and analyze them in innovative ways. This also entails building hitherto unprecedented relationships with the private sector, which has been vastly more effective than public actors in developing widely adopted and successful technologies and applications.

To be sure, the notion of introducing ICT into governance processes is not new. Since the early 2000s, the leadership has energetically pursued ‘state informatization’ (*guojia xinxihua* 国家信息化), announcing ever more ambitious plans for digitized government services, enhanced transparency concerning public affairs, and more efficient, ICT-powered workflows. These plans, among others, fuelled an ICT infrastructure construction boom that is enabling the rapid spread of broadband and mobile technology outside the first- and second-tier cities where the internet spread initially (State Council 2017). Some of the political implications this paper discusses had already emerged here in embryonic form. With regard to the use of ICT for intragovernmental oversight, for instance, Jesper Schlaeger (2013) discusses how the introduction of ICT in local public administration created a digital Panopticon, meaning it was easier to monitor the job performance of local government personnel, as well as a battering ram, meaning stronger tools for higher-level authorities to compel compliance at lower administrative rungs. As Christian Göbel indicates, China uses ICT to ‘increase legitimacy-relevant outputs as well as to increase the capability of regime elites to monitor the performance of its agents, to aggregate and process popular demands, and to persuade people to support the regime’ (2013: 399). However, these measures are perhaps best understood as evolutionary. Although they speed up existing processes and enable information to travel more efficiently, they do not enable new forms of analysis or government decision-making.

In recent years, however, many interrelated factors have greatly expanded the impact of ICT on Chinese social, economic, and political processes. First, technological development has allowed the gadgets used to access the internet

to become much more sophisticated. Not only can they consult more online information, but they also generate more and qualitatively different data, consciously and unconsciously. This creates new sources of value not only in economic but also in political terms ('datafication'; Taylor and Broeders 2015). As elsewhere in the world, the Chinese government has increasingly sought to use surveillance tools to enable 'social sorting', profiling, categorizing, and extending differentiated treatment to individual citizens (Lyon 2005). Second, as the price of these gadgets has dropped, and Chinese living standards have risen, more Chinese citizens have become connected, in particular through mobile technology. Of the 731 million internet users in China in early 2017, nearly 700 million primarily use their mobile gadgets for connectivity according to the internet regulator China Internet Network Information Centre (CNNIC 2017). Third, the leadership has dedicated growing attention to integrating and centralizing ICT affairs, as evidenced by the establishment and expansion of the Cyberspace Administration of China (CAC) (*Guojia hulianwang xinxì bangongshì* 国家互联网信息办公室), as well as the Central Leading Group for Cybersecurity and Informatization, chaired by Xi.

How do these developments influence the architecture of China's governance structure? This paper focuses on two elements that are radically transforming the modus operandi of the Chinese state. First, it discusses the rapid emergence of the huge private corporations that have come to dominate China's internet and the increasing symbiosis between them and political processes. This paper argues that a strategic public-private nexus is forming at the centre of China's political architecture, where the particular properties of private internet corporations are used to counter some of the perennial problems that plague the Party-state. Second, it discusses the leadership's perception of how new forms of data, data gathering, processing, and analysis (generally referred to as 'big data' [*da shuju* 大数据]) may enhance its governing capabilities (*zhizheng nengli* 执政能力). Prior e-governance efforts were largely dedicated to the digitization of existing data, generally held by state bodies. However, in China as elsewhere, private corporations have rapidly developed new profit models based on the exploitation of previously unmined data. Unsurprisingly, China's control-oriented government sees this as a great opportunity to enhance its ability to monitor the activities of its citizens, businesses, and government officials. One particular manifestation of this approach is the social credit system (*shehui xinyong tixi* 社会信用体系) that is currently under development. This paper also argues that the data-empowered agenda is starting to radically disrupt China's information order. From the central point of view, it will erode the separation between the centre and the periphery, as encapsulated in the well-known proverb 'the mountains are high, and

the emperor far away' (*shan gao, huangdi yuan* 山高皇帝远). Nevertheless, as internet-based approaches become institutionalized, it is equally likely that current governance pathologies will be reproduced online.

2 The Changing Role of Enterprises

Over only a few years, several internet and technology companies that have become household names have emerged and rapidly expanded in China. From a political point of view, perhaps their most salient characteristic is that they are privately owned. Throughout the reform era, it has been a central tenet of economic policy that the Party-state would maintain control over the 'commanding heights' (*zhigaodian* 制高点) of the economy. This control was realized primarily by reserving certain economic activities to state-owned or state-controlled enterprises (Brødsgaard 2009). The traditional media sector, including print and broadcast media, was held tightly in the hands of the state: foreign investment was, with the exception of a few collateral activities, banned (Ministry of Culture et al. 2005; NDRC 2017), and domestic private capital investment was severely limited (State Council 2005). In contrast, the online industry is perhaps the only sector that can conceivably be described as part of the 'commanding heights' and that is dominated by private companies. In sectors ranging from media to finance, state-owned enterprises (SOEs) have generally steered a conservative course, creating opportunities for more innovative and entrepreneurial private players to arise. Currently, the three giants Baidu, Alibaba, and Tencent (often jointly referred to as the BAT), which all have user bases numbering in the hundreds of millions, are posting strong economic records and have come to play an increasingly important role in Chinese citizens' daily lives. The mobile phone manufacturer Xiaomi, with its idiosyncratic development approach directly targeting China's burgeoning middle class, has become the third-largest mobile phone manufacturer in the world (Shirky 2015). They have also come to be lauded as national champions of innovation and development, enjoying visible support from authorities at home and abroad. They are, for instance, closely involved in smart city, telecommunications infrastructure, and e-commerce projects across a range of nations in South-East Asia and Africa (Mensah & Mi 2016, Lewis 2017).

Relationships between the government and the corporate side have not always been so cordial. With respect to social media, Lagerkvist (2012) has described the relationship between the state and media corporations as one of uneasy cooperation, characterized by perennial principal-agent issues. Throughout the 2000s, government policy evinced little consideration about

the utility of a private presence in the online space. Instead, most support was given to state-run media platforms, such as People's Daily Online, and state-owned telecommunications businesses, such as the mobile network operators China Telecom and China Unicom. Perhaps the highest-profile exception, Huawei, was still closely associated with the military. In several cases, businesses were shut down or suspended summarily for political reasons. The budding social media provider Fanfou, for instance, was closed after it was used in the organization of anti-government protests in Xinjiang (Sullivan 2014). The crackdown on Sina Weibo in 2013 resulted in a steep decrease in activity, as well as cutting Sina's share price in half (Moore 2014).

Yet even as internet control grew stricter after Xi's accession and the creation of the CAC, the new leadership has cultivated its relationship with private internet businesses with considerable vigour. Instead of the uneasy mutual accommodation Lagerkvist describes, the interaction between state bodies and corporations is growing more complex and, indeed, more mutually supportive. In institutional terms, corporate officers have gained an increasing presence in political circles, while their businesses have accommodated the presence of the Party-state. On the ground, corporations are increasingly working together with governments at the central and local level to deliver development outcomes or provide platforms for e-governance. We address these two dimensions in turn.

The increasing institutional intermingling between political and business circles occurred in two directions, with the Party-state gaining a growing presence in corporate managerial processes, and business leaders becoming part of political consultation and decision-making bodies. As is standard practice in major enterprises, Chinese internet companies, such as Alibaba, Tencent, Baidu, Sohu, and Sina, had established Party committees by 2012. Newcomer Xiaomi established its own Party organization in 2015, causing a bit of a stir on social media (Sohu 2015). In the spring of 2016, media reports suggested that government departments were considering taking a small stake as well as a board seat in internet corporations. Although these reports remain unconfirmed at the time of writing, they recall language in the Report of the 2014 fourth plenum, which called for the creation of 'special management shares' for online media businesses (Yuan 2016). Trials for this system were outlined in the thirteenth five-year plan (State Council 2016a). According to an analysis by the law firm King & Wood Mallesons (2016), this system would 'effectively prevent hostile takeovers during structuring and financing and ensure that the founding shareholders have the most decision-making rights and control'.

Conversely, corporate managers have gained a presence in political bodies as well. The first venue where they gained prominence was the Internet Society

of China. This is an intermediary organization under CCP guidance, which provides a platform for online interaction between different stakeholders. Until 2008, most of its governing council members were technological experts, state functionaries, and academics. Since then, some of China's best-known internet entrepreneurs, including Alibaba's Jack Ma, Tencent's Pony Ma, and Baidu's Robin Li, were appointed among the council's twenty-five vice-directors (ISC 2004, 2008). Moreover, these entrepreneurs have also gained membership in China's most elite political bodies. Li, for instance, is a member of the Chinese People's Political Consultative Conference. Jack Ma and Pony Ma, as well as Xiaomi's founder Lei Jun, are members of the National People's Congress. At the 2016 Work Conference on Cybersecurity and Informatization, where Xi Jinping outlined his agenda for the development of cyberspace, Xiao Xinguang, the chief software engineer at cybersecurity provider Antiy Labs, Yao Hongyu, CEO at computer engineering firm Yoyosys, Huawei's Ren Zhengfei, and Jack Ma all had speaking slots (Xinhua 2016).

The key to this thick network of personal connections, memberships, and affiliations is the notion that government and corporate interests largely overlap and are often mutually supportive. Business leaders and their companies are increasingly showing visible support for political initiatives and development policies. The presence of internet business leaders has become a feature of Chinese state visits overseas. In 2014, Xi presided over the signing of an agreement between Alibaba and the Brazilian postal service to facilitate the development of e-commerce in Brazil (*People's Daily* 2014). Jack Ma, Pony Ma, and Robin Li as well as Lenovo CEO Yang Yuanqin joined Xi on his first state visit to the United States in 2015 (ACT 2015). Businesses play a prominent role in the Wuzhen World Internet Conference, a CAC initiative aimed to enhance China's influence in global internet governance and development, where China's internet businesses take pride of place. Their leaders generally offer prestigious keynote speeches, participate in conference sessions, and contribute to a high-profile trade exhibition on how the internet facilitates development and prosperity. They also contribute in material terms. VIPs at the second meeting of the conference in 2015, for instance, received a Xiaomi smartphone preloaded with a special conference app. Alibaba's strength in logistics and in matching buyers and sellers has been used to develop the idea of a 'Taobao village', where local economic production can gain access to national markets, fostering opportunities for bottom-up development in impoverished areas (Leong et al. 2016).

The growing familiarity between political and corporate circles is manifested not only at these symbolic levels but also through the growing adoption of these businesses' platforms by government actors. One prominent example is

government use of social media. The initial dominant view among propaganda authorities was that social media were largely a potential risk to be kept under control, but, gradually, greater awareness grew about the opportunities to communicate with citizens that these new platforms generated. The number of official microblogs rapidly expanded from a few hundred in 2010 (Schlaeger & Jiang 2014) to over 145,000 in 2015 (*People's Daily* and Weibo 2015). These microblogs are used for increasingly numerous purposes. Initially, content on these microblogs largely echoed traditional state media practices (Noesselt 2014), but they rapidly developed much more sophisticated modes of audience engagement (Esarey 2015). Moreover, although most academic research in this area has focused on the 'sending' of government information, an equally important topic is the role that social media play in allowing official actors to receive information and feedback. As WeChat provider Tencent (2015) claims in its white paper on government use of its platform, the delivery of social goods, ranging from policing services and health care to traffic and subsidies is rendered more efficient thanks to government use of microblogs.

Government departments are not only using the core services of private corporations, they are also increasingly retaining them as contractors to realise a broader development agenda. Successive policies have supported the use of government procurement as a tool not just to support business development but also enhance government performance (Central Committee & State Council 2015). Baidu, for instance, is using its considerable capability in online search and data management to power some of the databases that make up the social credit system currently under construction. The first of them is the website Credit China (Xinyong Zhongguo 信用中国),¹ run by the State Information Center under the auspices of the National Development and Reform Commission and the People's Bank of China (PBOC, the central bank). The website contains credit records of both businesses and private individuals. Similarly, Baidu is powering a website run by the Supreme People's Court,² which contains a database of legal records of individuals and businesses. Alibaba is working together with local governments, amongst others the government of Xinjiang, to develop e-commerce and the concomitant logistics in some of China's poorer, less-populated, and less-developed regions, allowing both easier access to markets for local products as well as better access to products from elsewhere (*China Daily* 2014). Tencent is sponsoring a number of data-based development projects in rural regions of China and has concluded strategic framework agreements with a number of provincial

1 <http://www.creditchina.gov.cn>, accessed 17 May 2018.

2 <http://www.chinacourt.org>, accessed 17 May 2018.

governments to collaborate on the delivery of social services (*People's Daily* 2015). Lastly, internet companies are reportedly building links with traditional SOEs, in order to enhance their efficiency and productivity. For instance, Alibaba was enlisted by the petroleum giant Sinopec to build a trading platform for oil and gas (*Wall Street Journal* 2016).

This is not to say that the relationship is completely without wrinkles, all the time. Although business interests and those of government or government-affiliated actors often converge, in some instances, conflicts arise. For instance, the expansion of companies such as Tencent and Alibaba into mobile banking activities was not met with relish by large state-owned banks (Bloomberg 2013). More recently, the PBOC refused to grant permanent credit-scoring licences to both companies, as well as six others, citing concerns about poor business practices and conflicts of interest (Creemers 2018). The growth of taxi apps such as Didi Kuaiche has run into opposition from traditional taxi companies (Quartz 2015) as well as municipal governments that issue lucrative taxi licenses. Moreover, the government maintains the power to sanction internet companies in various sophisticated ways in cases of transgressive behaviour. In one prominent example, Baidu was named and shamed after a minor died as a result of a medical treatment he had found on the company's search engine. This incident sparked an outcry concerning Baidu's alleged failure to bear social responsibility in its single-minded pursuit of profit (Custer 2016). As a result, the CAC passed stricter regulations on online advertising, limiting the amount of advertising space available on search engine pages (CAC 2016). This pattern indicates the asymmetry of the state-corporate relationship: government actors regularly call out and sanction private businesses for alleged misbehaviour, while businesses prefer low-profile tactics and avoid public controversy. Nevertheless, these measures do not amount to an existential threat to large businesses, in contrast to the fate, for instance, of Fanfou and Weibo in the past.

To summarize, a strategic nexus based on well-understood mutual self-interest seems to be developing between private enterprises and China's leadership. Government increasingly relies on services, technologies, and platforms provided by private enterprises to achieve its multiple aims, including economic growth, social management, and the maintenance of discipline within the bureaucratic hierarchy. To be sure, this nexus is not uncontested and is somewhat imbalanced. The government remains the stronger party in this relationship, even if the political cost of intentional damage to the internet sector has risen. But it would be wrong to consider, as analysts have done in the past (Endeshaw 2004; Jiang 2012), merely the contention between government and corporate interests and overlook the (predominant) extent to which their interests align.

As indicated earlier, the government previously took a much more confrontational approach in its management of internet businesses. What has motivated the shift to embracing private corporations on the internet? First and foremost, recognition has grown that private enterprises have been successful in developing the sort of innovative technologies and applications that have been the objective of numerous policy initiatives over the past few decades. China's internet giants have become national champions that not only dominate the domestic market but also have increasing ambitions abroad. Second, these businesses are able to connect to individual Chinese citizens in a way the government has not been able to. On the one hand, this has enabled the government to use private platforms to connect more successfully with citizens, for instance, through official microblogs and WeChat accounts. One particularly piquant example against the background of the continuing anti-corruption drive is the fact that the Central Discipline Inspection Committee has launched an app that, amongst other things, enables citizens to report abuse directly to Beijing (ThePaper 2015). This bypasses the need for the messy and controversial process that involves petitioning the central government in Beijing. On the other hand, the more intimate relationship companies enjoy with their customers means they have been able to harvest much richer datasets about individuals' behaviour. A corollary of this is that private internet companies may play a useful political role in overcoming the information barriers that characterize the traditional party structure. As private businesses are often less beholden to local bigwigs and interests, they are—perhaps counterintuitively—in a better position to furnish the central leadership with accurate information than the bureaucracy is. Lastly, the leadership seems to have realised that the nature of the internet means leading businesses are relatively easy to identify and control. In China, as elsewhere, network effects have conspired to generate a small number of large companies that dominate their own sectors. From the government's point of view, this means relationships are only necessary with a small number of actors, whose interests and objectives are well known and do not conflict in principle with those of the Party-state.

3 Big Data

One key to understanding the public-private nexus lies in the fact that private corporations are able to obtain, process, and analyse data in a manner that the government cannot. For decades, the informatization agenda has been based on the assertion that information about China's citizens, society, and economy should be harnessed in order to enhance governing capability and economic

prosperity. Certainly, anyone who has ever heard a statistics-laden Chinese official statement or speech understands the centrality that ‘objective’ (*keguan* 客观) and ‘scientific’ (*kexue* 科学) information plays in policy-making and implementation. However, technological limitations and conservatism among government departments meant that these informatization efforts consisted largely of incremental reform, often based on digitization of data government already possessed. As elsewhere in the world, the rapid expansion of recorded data fostered by the private information technology industry has created considerable potential for increasingly sophisticated analytics, something that the new internet leadership has sought to capture with its emerging policies concerning the use of big data.

3.1 *Development of Data Policy*

The term ‘big data’ started appearing in regulatory documents and policy-related texts in 2013, when it often featured as part of a list of technologies that needed to be controlled in a new era of informatization (State Council 2013). Then already, Shanghai Jiaotong University professor Hu Huilin (2013) opined, ‘Whoever grasps [big data] will become the rule maker and rule changer of future development’. Gradually, Party leaders and official media started providing greater detail on how big data was to be mobilized to enhance the Party-state’s governing capability. Propaganda chief Liu Qibao (2014) and State Internet Information Office (SIIO) vice-director Ren Xianliang (2014) successively called for its use to improve news production and accelerate media convergence. For National Defence University researchers Zhao Zoujian and Xu Zhidong, data was ‘becoming an important production factor on par with material capital and human capital’, and it ‘provided seamless methods of producing, exploiting and using information for ideological work, with comprehensive information collection as precondition, and on the basis of processing and comprehensively analysing information to turn it into valid information, conducting analysis, determination, filtering and refinement turns it into valuable information, and so it is possible to arrive at a complete understanding and correct grasp of the targets of ideological work’ (Zhao & Xu 2015). Nevertheless, they were also concerned about the potential security implications of big data analysis, as ‘in the big data era, many seemingly unrelated data may become important top-secret data through comprehensive analysis’. Because of this, they argued, ‘on the one hand, we must strengthen the security protection of our own information, and ... use domestically produced equipment and standards as much as possible; on the other hand, we must realistically grasp the new opportunities brought by this burgeoning area, incessantly follow and research big data, and strengthen the exploitation and

use of big data' (Zhao & Xu 2015). Also writing in *Red Flag Manuscripts*, Song Fangmin (2015) foregrounded the role of big data in managing the economy, monitoring the ideological and propaganda sphere, and enhancing citizens' supervision over the judicial process. Wang Yongqing (2015), the chief secretary of the Central Political-Legal Committee, draws attention to the potential of big data to assist in social governance, as it 'allows us to understand the essence of events and grasp future trend more clearly', and indicates that 'we must comprehensively collect basic information about people, places, things and events as well as dynamic information about [their] eating, living, activities and consumption, and strengthen correlative analysis'.

At the local level, various municipalities launched initiatives to introduce big data in government services or industrial development. Shanghai, for instance, launched a three-year plan in which it would trial big data-based applications in six policy areas: health care, food security, life-long learning, smart traffic, public security, and science and technology services (Shanghai Municipality 2013). Beijing focused more on using big data to transform traditional industries and sought to promote the technology hub Zhongguancun as a base for indigenous innovation (Zhongguancun Management Committee 2014). Other regions, including Chongqing, Shaanxi, and Hubei, established big data incubation centres (CATR 2014: 23).

Not just the use of big data but also the construction of related infrastructure provides economic potential. One locality that has sought to take advantage is Guizhou. In July 2013, the provincial government published a strategic plan for the development of the cloud computing industry, followed by a comprehensive big data strategy (Guizhou Province 2014). A few months later, a number of large data centres were set up in Guiyang, profiting not only from a supportive policy and commercial environment but also from the availability of cooling water and hydro-energy in the surrounding hills. Companies including Alibaba, HP, and Foxconn rapidly established facilities in Guiyang (Yibada 2015). The successes of the Guizhou experiment quickly translated into central policy support. Most prominently, Xi Jinping visited and anointed Guiyang as the first national demonstration zone for the development of the big data industry (Xinhua 2015). Guiyang now also hosts an annual flagship Big Data Expo, with the support of the National Development and Reform Commission (SCMP 2016). As a further badge of endorsement, Guiyang's Party secretary was commissioned to write a comment piece in the flagship Party journal *Qiushi* (*Seeking Truth*) on the 2016 national big data strategy (Chen 2016).

These local initiatives notwithstanding, it was broadly held that China had a long way to go in developing big data capabilities. A white paper by the Chinese Academy of Telecommunications Research outlined three major barriers to

the continued development of the big data sector: insufficient data resources and insufficient data openness, insufficiently sophisticated and widespread technologies, and an insufficient regulatory framework (CATR 2014). Moreover, the fragmentation of existing initiatives along local and department lines, in the eyes of policy makers, constrains the effectiveness of the big data sector.

As part of the broader ‘strong cyber power’ push, these issues were addressed in a series of central-level policies made public beginning in early 2015. Big data featured prominently in the ‘Internet Plus’ action plan (State Council 2015a), and development policy for the cloud-computing sector (State Council 2015b). In June, the State Council published policy guidelines on how to use big data in the supervision of market actors (State Council 2015c), the first explicit coupling of big data and the social credit system discussed below. Two months later, it issued the ‘Action Plan to Stimulate the Development of Big Data’, which outlined a comprehensive national strategic orientation for the application of big data, as well as the development of supporting infrastructure and human resources. This policy outlines, in considerable detail, how the leadership envisions the application of big data to improve social governance, increase the efficiency of economic processes, enhance public welfare, and support start-ups and new industries (2015d).

Apart from the substantive points of the big data policy, an entire section of the document dealt with the particular policy steps taken to fulfil its objectives, which is a process that remains underway at the time of writing. Most importantly, an Interministerial Joint Conference for the Stimulation of Big Data Development was established under the leadership of the NDRC, CAC, and the Ministry of Industry and Information Technology (MIIT), to provide a policy coordination and negotiation platform for the forty-three ministerial-level bodies involved.³ At its first meeting, the conference passed a short and

3 Apart from these three departments, and indicating the vast scope of application of the big data strategy, the Joint Conference includes the Central Institutional Organization Commission, the Ministry of Education, the Ministry of Science and Technology, the Ministry of Public Security, the Ministry of State Security, the Ministry of Civil Affairs, the Ministry of Finance, the Ministry of Human Resources and Social Security, the Ministry of Land Resources, the Ministry for Environmental Protection, the Ministry for Housing and Urban Construction, the Ministry of Traffic and Transportation, the Ministry of Water Resources, the Ministry of Agriculture, the Ministry of Commerce, the Ministry of Culture, the Commission for Public Health and Family Planning, the People’s Bank of China, the Audit Office, the General Administration of Customs, the State Administration of Industry and Commerce, the General Administration of Quality Supervision, Inspection and Quarantine, the State Administration of Work Safety, the State Food and Drug Administration, the Statistics Bureau, the Forestry Bureau, the Tourism Bureau, the Legal Affairs Office, the Chinese Academy of Science, the Chinese Academy of Engineering, the Weather Bureau, the Banking Regulatory

medium-term task list, and two documents to regulate interdepartmental information sharing. At the technical level, the National Information Security Technical Committee (also known as TC260) established a special working group to draft national standards for big data and cloud computing (TC260 2016).

At the time of writing, the initiative now seems to have shifted to the ministries, as big data plans have become more concrete. The thirteenth FYP for National Informatization contains a number of specific rubrics supporting the development of big data, including infrastructure construction and human resource training (State Council 2016b). Moreover, MIIT has become the first department to publish its ministerial-level big data plan (MIIT 2017), and others can be expected.

This big data development strategy comprises multiple objectives, including economic development, better delivery of social services, smoothening horizontal and vertical information exchange between government departments, and, more generally, allowing government to gain a greater ability to 'see' what happens within the economy and society (see Scott 1998). Perhaps the highest-profile project to which these objectives will contribute is the social credit system.

3.2 *Social Credit*

The idea of social credit has been around since at least the turn of the century (Li 2000), but it has evolved considerably. In general, the system has been proposed as a solution to a perceived lack of trust between actors in the marketplace, which acts as a brake on economic growth. At first, the term was used mainly in reference to credit in the financial sense. Later, it expanded to compliance with legal requirements and court judgments as well as broader notions of moral conduct, sincerity, and trustworthiness. It also came to include government and judicial actors as credit subjects. At first, the social credit system did not explicitly connect to the informatization agenda. However, after 2014, increased technological possibilities and the heightened priority of the application of ICT in governance processes meant that the connection between social credit and data management grew increasingly thick.

This evolution is reflected in the process of social credit policy-making. The third plenum of the sixteenth Party congress officially called for the

Commission, the Securities Regulatory Commission, the Insurance Regulatory Commission, the Natural Science Funding Committee, the Energy Bureau, the State Administration of Science, Technology and Industry for National Defence, the Maritime Bureau, the State Bureau of Surveying and Mapping, and the State Secrets Bureau (State Council 2012).

construction of a social credit system, arguing that it 'is a necessary condition for building a modern market system, and is a fundamental policy in standardizing order in a market economy' (Jiang 2002). However, little additional detail was present, and over the subsequent years, the idea was often repeated in policy documents without much practical process. It took until March 2007 for the State Council to draft an initial document, which focused largely on corporate activities, including quality control, payment of taxes, reimbursement of loans, and compliance with contracts. In concrete terms, the document called for the improvement of records and databases concerning corporate activities, creating creditworthiness information platforms and fostering credit service markets (State Council 2007a). In order to oversee this process, an interministerial joint conference was established within the State Council, comprising the vice-directors of involved ministries and state bodies, such as the NDRC, the Ministry of Public Security, and the regulators for industry and commerce, taxation, customs, banking, and securities (State Council 2007b). Subsequently, relatively rapid progress was made on the first elements of the social credit scheme: the establishment of a financial credit investigation and reporting industry and the institution of punitive measures for violations of trust.

At the local level, some governments were experimenting with more far-reaching systems. One notable example is Suining County, in Jiangsu, which introduced a points system to measure individuals' behaviour in 2010. In this system, citizens started out with 1,000 credit points, and points were deducted for various infringements of legal, administrative, and moral norms (Suining County Government 2010a). For instance, a drunk-driving conviction resulted in the loss of 50 points, an unauthorized child cost 35 points, and lending arrears 30 to 50 points. Lost points could be recovered after two to five years. On the basis of the resulting scores, citizens were ranked from A to D, enjoying preferential treatment in terms of access to social services for higher ranks and corresponding restrictions for lower ranks (Suining County Government 2010b). Lists of point deductions, including offenders' names and actions, were published openly on the government's online forum (Ibid.).

In practice, the Suining system proved controversial, leading to vocal criticism in popular media. An article posted on the website of the official press bureau Xinhua compared it to the 'good citizen cards' (*liangminzheng* 良民证) that were issued during the Japanese occupation (Xinhua 2014). The *Global Times* (2016) criticized the fact that unlawful petitioning could lead to a loss of credit points. As a result, the A-D classification was dropped. Nevertheless, the Suining experiment foreshadowed some crucial elements in later iterations of the social credit idea, and it has pointed out a number of challenges to overcome. For instance, qualms about the quality and reliability of the data

Suining used led to much greater attention to these issues in subsequent documents, online real-name registration being one visible example. Also, the fact that the Suining system was limited to one county meant it was relatively easily sidestepped. Consequently, much attention was paid later on to data sharing between localities, different hierarchical levels, and government departments.

Other localities also started laying the groundwork for the social credit system, for instance, by compiling catalogues of information to be entered into the system. One of the leading cities in this enterprise is Shanghai, whose 2015 catalogue includes information from 97 work units, including 44 municipal administrative bodies, 16 district-level governments, 11 Shanghai offices of central departments, 2 people's organizations, the judiciary, 10 state-run institutions, and 13 social organizations; it identified 5,198 categories of credit information to be entered, of which 4,072 concerned legal persons, and 1,126 natural persons (Shanghai Municipal Credit Investigation Management Office 2016).

A major step forward was taken in 2014, with the publication of a much more elaborate plan for the construction of the social credit system (State Council 2014). In contrast to the relatively concise brief of seven years earlier, this 12,000-word document provided a much broader range of objectives and policy proposals. No longer merely focusing on the market economy, this plan gave first place to social credit in government affairs and included social credit among members of society and the judiciary. It also recognised the fact that, previously, initiatives had been developed in an ad hoc and fragmented manner, and it called for a better exchange and sharing of information. In turn, this requires the construction of technical platforms facilitating the collection and integration vertically (between different hierarchical levels of government) and horizontally (between the various functional departments).

It was at this point that the social credit scheme started to become interwoven with the informatization project. In 2015, a plan was published to integrate big data with supervision of market subjects (State Council 2015c). In practical terms, the plan called for the use of big data to monitor conduct in different market segments, with priority given to areas such as food and drug security, consumer protection, and production safety protection. This would be realized, for instance, through big data-powered product and process tracing, greater oversight over e-commerce platforms, and enhancing e-government capabilities. Furthermore, in 2015, the Credit China website, the centralized data-sharing platform for which the government had been calling, went live. Powered by Baidu, this website is intended to group all information about Chinese natural and legal persons. However, a recent summary perusal of the website suggests that comparatively little information has been uploaded to date.

The technical agenda was furthered at the end of 2016, with a State Council document outlining the construction of a 'personal sincerity system'. In particular, it called for the creation of a uniform citizen credit code system, in which biometric characteristics such as fingerprints would be combined with identity number data and an online real-name registration system to cast a wide net in obtaining and verifying personal information. Specific priority was given to the credit assessment of 'public servants, corporate legal representatives and their relevant responsible persons, lawyers, educators, doctors, professional pharmacists, assessors, tax specialists, registered fire safety engineers, accountants and auditors, housing intermediaries, notaries, financial employees, tourism employees and other such professional communities' (State Council 2016c).

To date, the construction of these information-sharing platforms is ongoing. Currently, quantitative scoring is not yet a functioning part of the social credit system. Instead, it consists mostly of blacklist mechanisms, in which disproportionate sanctions are imposed for breaking particular rules. The basic principle is that 'if trust is broken in one place, restrictions are imposed everywhere' (Central Committee & State Council 2016). The most expansive system is the 'joint punishment system for untrustworthy persons subject to enforcement', which covers nonperformance of legal judgments. Here, individuals are entered on a blacklist, which in turn is used to curtail particular privileges. For instance, offenders could be barred not just from serving in high-level managerial positions but also from traveling on luxury trains and staying in high-end hotels.

The approach is quite broad and widely supported among the bureaucracy: a sixty-page inter-departmental memorandum outlining the basic functioning of the system is countersigned by forty-four different Party and state departments, and it includes a forty-page attachment identifying how specific sanctions relate to various legal bases, and which departments should be in charge of implementing them (NDRC et al. 2016). The legal issues for which stronger enforcement is deemed necessary are nearly exclusively connected to conduct in the marketplace, while some of them address, for instance, the failure of government departments and officials to comply with transparency regulations. In turn, these mechanisms are connected with earlier SPC efforts to publish a name list of offenders who obstruct, resist, refuse, or avoid the implementation of valid legal judgments (SPC 2013).

Simultaneously with government initiatives, the private sector has also introduced credit-type mechanisms to their systems. Sina, for instance, has launched the Weibo Community Committee system, a user-based evaluation system that can punish users for posting various kinds of undesirable materials online, with possible sanctions, including curtailment of posting privileges or

of the ability to follow other users, or even deletion of accounts (Knight 2016). The most prominent (and notorious) scheme is Alibaba's Sesame Credit system. This scheme integrates users' personal information with a track record of their activities on the various parts of the Alibaba platform. Users' individual credit record is based on five categories, 'users' credit history, behavioural habits, ability to pay off debts, personal information, and social networks' (Ahmed 2017). Combining elements of a credit-scoring system with a loyalty scheme, the system does not seem to contain sanctions comparable to the Suining experiment, but users with a sufficiently high score do enjoy a number of perks. These range from deposit waivers for car rentals and lower interest rates on personal loans to expedited visa procedures for a number of countries, including Singapore and the Schengen area (Chuyouding 2016).

The potential confluence between these private systems and the public social credit scheme has led to considerable concern among foreign observers that China is building an Orwellian control machine. However, so far, the links between these systems remain unclear. Sesame Credit participates in the aforementioned joint punishment system by disallowing blacklisted individuals from making luxury purchases on the Alibaba system (*China Daily Asia* 2015).⁴ Yet it is not clear how participation in the (voluntary) Sesame Credit scheme would affect an individual's score in the official government environment (Ahmed 2017). However, even if the government were able to obtain all scoring data generated through Alibaba and other such private platforms, the question remains how this data could inform particular measures to monitor or incentivize behavior.

4 Implications: the Politics of Private Industry and Big Data

The new prominence of private parties and the explosive growth of data research has important implications for the way in which the Chinese state is (re)structured and how it operates.

The first implications concerns the sort of relationship the leadership intends to maintain with non-Party or non-state actors. The fact that the internet industry is not dominated only by private actors but that it is flourishing in a way state-directed equivalents could not have done may have a considerable impact on how the Chinese government manages further economic change. Lessons learned from the way in which effective political control is combined with economic success on the internet may be applied elsewhere in

4 http://www.chinadailyasia.com/business/2015-07/02/content_15284668.html.

the economy, providing an economic development path more effective than the current (stalled) reform initiatives and more politically acceptable to the leadership.

Cooperating with private enterprises also has an impact on the leadership's engagement with private citizens. The government seemingly intends to combine corporate innovation, market success, and the benefits of competitive markets with a top-down driven agenda of restructuring social management and increasing governance efficacy. Private enterprises are rapidly becoming key intermediaries between the state and citizens as well as in actions among private parties. On the one hand, this entails experimentation with new forms of participation and input mechanisms, even if these mechanisms are constructed in such a way that no salient political decision can be taken outside the system. On the other hand, this enables the Party to further consolidate the neoliberal elements it has introduced in its governance style. The social credit system, with its focus on individual accountability and responsibility for one's conduct, as well as its roots in market conduct, exemplifies the extent to which Chinese citizens will be further recast as 'consumers', both of economic goods and services and of government services.

A second implications concern the arrangement of information flows into and within the state. The parlous conditions in intrastate reporting are well known, exemplified by Premier Li Keqiang's reported lack of trust in the country's economic statistics (Palmer 2018). Data provided by omnipresent sensors run by non-state entities will enable central government actors not only to better perceive what is going on in social and economic spheres but also provide them with more accurate tools for monitoring local officials. As a side effect, this may also reduce the importance of a number of professions whose development had been supported to curb local officials' misconduct and enhance information collection by the central government: journalists, academics, and legal professionals. The centralisation of political power under Xi Jinping seems to shift attention away from internal reporting (*neican* 内参) and investigative journalism, an increasing reliance on government-affiliated think tanks instead of universities and research institutions for policy-relevant information (CCP General Office 2015), and greater reliance on public opinion monitoring and technological surveillance tools. As they are less susceptible to the machinations of local government, private internet businesses play an important role in these processes as well: they can generate reliable information without interference from lower-level officials but also without the liberal professions' aspirations to political reform. In other words, if the fragmentation and weak oversight within China's political structure was traditionally referred to in the context that 'the mountains are high and the emperor far

away', Beijing's intention is apparently to use technology to flatten the mountain and bring the eye of the emperor into the daily activities of citizens and officials alike.

To summarize, it seems that the current leadership under Xi is seeking innovative solutions to the perennial problems of China's enduring Leninist system. Although many aspects of this agenda have not gone beyond the planning stages, once implemented, it promises to greatly disrupt the internal functioning of the Party-state as well as its relationship with society. At the heart of this disruption is the rechanneling of information flows. The increased ability of the leadership to rely on data generated by increasingly ubiquitous sensors, terminals, devices, and gadgets reduces its dependence on traditional forms of reporting, including the Party-state's internal structures as well as information-based professions, such as the academy and investigative journalism. Conversely, this new information order depends on the collaboration of a new sort of actor in this political context: China's emerging large private internet corporations.

Still, some critical points need to be made in order to avoid overdetermining the impact of ICT on socioeconomic development or political change. They can also inform future research, particularly as the execution of the various plans mentioned in this paper unfolds.

First, and perhaps most importantly, there is the simple question of whether it will be possible to make the system function reliably and securely at its most basic technological level. The Chinese leadership has recognized the enormous strides it still needs to make in order to ensure the security of its systems: it is no coincidence that 'cybersecurity' comes before 'informatization' in the name of the leading group and first in the abbreviated term *wangxin* 网信.⁵ Of course, China is not alone in facing this problem, as governments worldwide struggle to protect critical information systems and infrastructure from hacking attacks and cybercrime. Yet China faces a few particular challenges, which include upgrading its ICT base from obsolete (and often illegal) software and ascending the learning curve in its stated intention to develop a world-class ICT cybersecurity industry of its own. Even that industry faces severe challenges from within: an investigation by the Guangzhou-based newspaper *Southern Metropolis Daily* found that, at the comparatively low price of RMB 600 (roughly 80 euros), reporters were able to obtain records containing 'a full history of hotel rooms checked into, airline flights taken, internet cafes visited,

5 This term, combining 'cybersecurity' (*wangluo anquan* 网络安全) and 'informatization' (*xinxihua* 信息化), is commonly used in policy documents to refer to ICT policy.

border entries and exits, apartment rentals, real estate holdings—even deposit records from the country's four major banks' (*Southern Metropolis Daily* 2017).

And even if the security issue can be solved, the big data and social credit projects will still require the seamless interaction of numerous data resources generated by many different entities through diverse means. They include data from township registry offices and metropolitan administrations, e-commerce and social media sites, and likely even the mobile devices most Chinese netizens use to access the internet. From a technological point of view, ensuring this interoperability may be a tall order. Moreover, many of the data sources on which they are based may be low in quality. The Credit China website, for instance, contains precious little information as of the time of writing. Evidence from pilot projects in a number of cities seems to indicate that credit records are entered in a perfunctory manner, and seemingly important information about particular individuals does not seem to be entered. Ironically, this may also mean that the system may be less able to monitor political dissent than many of its detractors sometimes claim. In short, the value of big data systems relies fully on the government's ability to anonymize, standardize, and guarantee the quality and reliability of data going into the system, which will be a steep climb.

Lastly, even if these new policies are attempts to solve the pathologies besetting China's polity, it is likely that these will merely migrate to the new approach. While the informatization agenda is informed largely by a desire to demolish the institutional barriers fragmenting the government's information order, departmental protectionism, turf battles, and strife have become part and parcel of the reform of the internet management structures. In conversations with the author, policy makers ascribed the dismissal of CAC minister Lu Wei, for instance, to acrimony between the CAC and the security bureaucracies. Administrative duplication has invaded the technology sphere, with the MPS's multilevel protection system and the CAC's security review system for critical technologies and systems overlapping considerably in form and function. Although the social credit system and other e-governance projects might reduce the discretion of local government officials, they also create a new caste of powerbrokers using their power over information collection, processing, and application as political currency. Scuffles may occur between private and government actors regarding access to data, particularly where doubts about the security of government-held data may affect the business operations of private enterprises. Moreover, as Vivienne Shue reminds us, 'embedded in the very logic of legitimation advanced by a system of domination we can find the grammar that may be used most effectively by citizens and subjects in making statements in opposition and in resistance to that system' (2010: 28). The

commitments and promises made by the leadership about its asserted benevolence and capability will create the yardsticks by which its population will evaluate success.

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