

Technology and Chinese Communist Party Power

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The emergence of a technology-enabled police state in Xinjiang and the construction of China's social credit system are two examples of how CCP is utilizing technological innovation to improve its capacity for control. However, they are not entirely new developments attributable to Xi Jinping. Rather, they are connected to developments unfolding in China since the Deng era, in which political control has been tied to everyday economic and social management and technology is seen as a tool that will help support this system. As advances in artificial intelligence and big data progress, the Party's capacity to identify and predict threats will simultaneously improve the CCP's governance capacity and overall capacity for control.

Xi Jinping's October 2017 report at the 19th Party Congress called for:

*"Strengthening the construction of the social governance system, to perfect the social governance system with regards to the party committee's leadership, the government's accountability, society's cooperation, public participation, and assurance of the rule of law. Raising the standards of socialization of social governance, rule of law, intelligentization, and professionalization."*¹⁰⁸

The "intelligentization" of "social governance" refers to what one article concretely described as "[reconstructing] the form of how social production and social organization relate with each other" using information technology such as big data, cloud computing, and Internet of Things (IoT). The objective is to improve the parts and standards of the social governance process, thus making the entire social governance process "more optimized, more scientific, and more intelligent."¹⁰⁹

¹⁰⁸ " Xi Jinping: Secure a Decisive Victory in Building a Moderately Prosperous Society in All Respects and Strive for the Great Success of Socialism With Chinese Characteristics for a New Era -- Report Delivered at the 19th National Congress of the Communist Party of China." [习近平：决胜全面建成小康社会 夺取新时代中国特色社会主义伟大胜利——在中国共产党第十九次全国代表大会上的报告], *Xinhua*, 27 October 2017. http://www.xinhuanet.com/politics/19cpcnc/2017-10/27/c_1121867529.htm.

¹⁰⁹ Yaxia Yang. "Applying Big Data to Improve the Standards of Intelligentization of Social Governance [应用大数据提升社会治理智能化水平]" *Guangming Daily*, 10 April 2017. http://epaper.gmw.cn/gmrb/html/2017-04/10/nw.D110000gmr_b_20170410_3-11.htm.

Reconstructing the relationship between “social production and social organization” requires that the Party integrate itself with society and get accurate information about what takes place.¹¹⁰ The Party must prevent itself from becoming irrelevant in the society it governs, which is why the CCP has long tied its political control to everyday economic and social management. Technology is seen as a tool that will help support this system.

As advances in artificial intelligence and big data progress, the Party’s capacity to identify and predict threats will ideally simultaneously improve the CCP’s governance capacity and overall capacity for control. With this in mind, the emergence of a technology-enabled police state in Xinjiang or the construction of China’s social credit system, which have been prominent regular headlines in global media since the 19th Party Congress, are not entirely new developments attributable to Xi Jinping. Instead, they are connected to developments unfolding in China since the Deng era.

Technology and CCP Power

In September 2018, the National Development and Reform Commission said it made an agreement with the China Development Bank to invest USD14.8 billion in big data, cloud computing, and smart cities projects.¹¹¹ Innovation in these science and technology areas, in addition to things like artificial intelligence (AI) and IoT, has long been described as the driving force of China’s continued economic and social development.¹¹²

In 1988, Deng Xiaoping explained that “science and technology constitute a primary productive force.” More recently, Xi Jinping stressed that the “unprecedented power [of technology] drives economic and social development.” The Chinese Communist Party’s (CPP) objective of achieving a “moderately prosperous” society is thus tied to advances in science and technology.

Technology is the key to preventing the Party from becoming irrelevant by default as China’s society and economy develop. Technology largely supports the related tasks of problem identification, decision-making, and response. This has been true since the start of the “reform”

¹¹⁰ Hanning Yin. "The Mass Line is the Party's Lifeline and Fundamental Work Path [群众路线是党的生命线和根本工作路线]." *Red Flag Manuscript*, 10 September 2014. http://www.qsttheory.cn/dukan/hqwg/2014-09/10/c_1112427212.htm.

¹¹¹ Yawen Chen. "China to Invest \$15 billion in Big Data, Cloud Computing Over Next Five Years." *Reuters*, 19 September 2018. <https://www.reuters.com/article/us-china-economy-technology/china-to-invest-15-billion-in-big-data-cloud-computing-over-next-five-years-idUSKCNILZ17S>.

¹¹² Authorized Release: "Excerpts of Xi Jinping's Thoughts on Science and Technology Innovation" (1) Innovation is the Main Driving Force Leading Progress [授权发布: “习近平关于科技创新论述摘编” (1) 创新是引领发展的第一动力] *People's Network*, 1 March 2016. <http://theory.people.com.cn/n1/2016/0311/c402884-28192542.html>

period, but concrete systems have gradually been put into place since about 1994 via areas like e-governance and grid management. In the future, the progress will continue with investment in upgrades to e-governance and grid management, like “smart cities”.

The Chinese party-state leadership places the role of science and technology in its overall governance strategy, and this is linked directly to the CCP’s ideology. The key concept that allows us to understand the role of technology is “social management” or what is also known as “social governance.” Social management resembles a feedback loop, a cycle describing how the Chinese Communist Party shapes, manages, and responds to demands within both society and the Party itself. Some of these demands are the demands any government must respond to, but the overarching system is designed to enhance the CCP’s capacity to maintain and expand its own power.

The Party has clearly articulated that the process of innovating social management is its blueprint for maintaining power. The most visible manifestations of the Party’s objective to tie innovation in science and technology to this process are through systems such as “social credit,” “grid management,” and “smart cities.” Social credit involves the use of big data collection and analysis to support the monitoring, shaping, and rating of behavior via everyday economic and social processes. Grid management and successor smart cities integrate surveillance and other forms of data collection to improve both regular urban management and efforts to identify and manage threats to the Party’s political security. Each of these examples applies technology to social management and economic development to improve the CCP’s capacity for control while simultaneously supporting everyday governance.

Problem Identification, Decision-Making, and Response

A major component of social management policy is the idea that problems must be identified and managed at their source in order to prevent the emergence of challenges to the Party’s position in power. By managing problems at the source, the Party is focused on problem identification and response for a wide range of issues linked to social instability.¹¹³ These are not only related to the management of unrest or direct challenges to the Party but also (at least conceptually) to the management of issues like the allocation of resources, i.e. healthcare and social security or environmental protection.

This aspect of social management is what the CCP sometimes calls “source governance,” which is directly tied to the idea that ensuring the party-state’s security requires eliminating threats, requiring pre-emption via the social management process. One article, for instance, defined source governance as “[paying] more attention to the construction of civil utility and institutions,

¹¹³ Wei Liqun. “The Party’s 18 Great New Headways in Societal Governance [党的十八大以来社会治理的新进展]. *Guangming Daily*. 07 August 2017. http://www.cctb.net/llyj/xswtyj/ggzl/201708/t20170808_356556.htm

[and persevering] with scientific and democratic decision-making according to law, to prevent and reduce the emergence of social problems.”¹¹⁴ For this reason, social management is not narrowly about protest management. Instead, it is a broader pre-emptive management of threats to state security, which are inclusive of managing issues like social services allocation, corruption, or the economy.

In order to build the Party’s capacity to identify and respond to problems at their source, the CCP has prioritized science and technology as the tool social governance must rely on. The combination of technologies, ranging from surveillance, big data collection, cloud computing, and others, supports efforts to improve interdepartmental (and cross-agency) coordination and interoperability. Ultimately, this improves the Party’s capacity to identify and respond to problems preemptively or to emergencies as they unfold.

Present-day research related to decision-making emerges from a field that developed in the 1980s called “soft science” (软科学).¹¹⁵ Soft science is defined in China as a “system of scientific knowledge sustaining democratic and scientific decision-making,” and can be used in China to “ensure the correctness of our decision-making, and the efficacy of our execution.”¹¹⁶ In other words, the concept describes the application of technology to everyday governance and use of technology to inform the Party-state’s capacity to make and implement decisions.

These basic objectives are not entirely unique to China, but are found in global efforts to apply technology to issues such as emergency management. China is different because the concepts are inextricably linked to the CCP’s Leninist ideological and political security. Political security is the pre-condition for ensuring all other aspects of Chinese state security.¹¹⁷ “Political security” is the objective of ensuring the Chinese Communist Party’s leadership—as in both the core Party leadership’s authority over the whole Party and the Party’s authority over all of society.

E-government

¹¹⁴ ““十二五”规划纲要 (Outline of the 12th Five Year Plan).” 16 March 2011. http://www.china.com.cn/policy/txt/2011-03/16/content_22156007.htm

¹¹⁵ Newspaper Commentator, “Research Soft Science in order to promote Democratic and Scientific Decision-Making [研究软科学，促进决策民主化科学化]” *The People's Daily*, 27 July 1986. <http://www.laoziliao.net/rmrb/1986-07-26-3#733575>

¹¹⁶ Si Zhuang. “Soft Science Necessitates the Mastery of Hard Skills [软科学需要硬功夫]” *The People's Daily*, 4 January 2007. <http://scitech.people.com.cn/GB/5242834.html>.

¹¹⁷ Central Party School Research Center on Xi Jinping Thought on Socialism with Chinese Characteristics for the New Era. “Be Prepared for Danger in Times of Peace and Seek Security After Understanding the Danger-- In-Depth Study and Implementation of the 19th Party Congress Report on the State Security Concept [居安思危 知危图安——深入学习贯彻十九大报告坚持总体国家安全观的重要论述]” *Qiushi*, 15 February 2018. http://www.qstheory.cn/dukan/qs/2018-02/15/c_1122402297.htm.

The ideas were theoretically connected at the start of the reform era, but specific plans to connect economic and social development were being implemented by the mid-1990s. One starting point was e-government (“with Chinese characteristics”).¹¹⁸ As it is understood globally, e-government is defined as the use of technology to improve a government’s “ability to transform relations with citizens, businesses, and other arms of government.”¹¹⁹ It is largely about improving ease of access to information and, along with it, things like government accountability.

In its earliest forms, e-government in China was often described in relation to improving official accountability. Similarly, in 2004, Premier Wen Jiabao tied e-government to government administrative system reform.¹²⁰ Accountability does not imply true transparency, and calls for accountability are not about objective anti-corruption efforts. Instead, it is about the Party cadres being accountable to the center and its demands. It is also about ensuring the Party masses effectively manage relations with society, using both cooperative and coercive means.

In China, therefore, e-government is not about the same form of government accountability that would be understood globally. It is more about integration of government resources, using technology, to improve processes like the CCP’s accountability *to* itself and its ability to ensure society’s accountability to the Party. Through the same process, the CCP’s the ability to govern and accomplish key tasks ranging from the allocation of resources to the strengthening of political-legal affairs should naturally follow.

China’s e-government plans first emerged between 1984 and 1990 when the State Council approved plans to develop national information systems covering about a dozen areas, including: the economy, banking, electrical power, civil aviation, statistics, taxation, customs, meteorology, and disaster mitigation.¹²¹ In 1993, the government initiated a series of national economic informatization systems engineering projects. These projects were initially known as the “Three Golden” Projects: “Golden Bridge,” a national information network and communications project; “Golden Gate,” a customs informatization project; and “Golden Card,” a project related to credit card and electronic banking development.¹²²¹²³

¹¹⁸ Gao Xinmin, “E-Government Enters a New Stage [电子政务进入新阶段,” *The People’s Daily*, 11 May 2002.

¹¹⁹ The World Bank. “e-Government.” <http://www.worldbank.org/en/topic/ict/brief/e-government>.

¹²⁰ Chengsheng Wang (ed.), *China E-Government Development Report No. 2 [中国电子政务发展报告 No. 2]* in *Blue Book of Electronic Development [电子政务蓝皮书]*, 153. Beijing, Social Sciences Academic Press, 2005.

¹²¹ Yu Xu and Hongren Zhou, “Analysis and Forecast on China’s Informatisation (2010) [中国信息化形势分析和预测 (2010)]” in *Blue Book of Informatisation [信息化蓝皮书]*, 8, Beijing, Social Sciences Academic Press, 2010.

¹²² Hongren Zhou, Hongyuan Xu, Yuxian Zhang, Changsheng Wang, and Xinhong Zhang, “China E-Government Development Report No. 1 [中国电子政务发展报告 No.1]” in *Blue Book of Electronic Development [电子政务蓝皮书]*, Beijing, Social Sciences Academic Press, 2003 .

The “Three Golden” Projects were just the first stage of the multi-phased implementation of the Golden Projects. Gradually the initiative expanded to about a dozen projects between 1995-1999. These included “Golden Tax,” “Golden Health,” and “Golden Sea,” among others. The government has designed systems enabling economic development and overall modernization so that they simultaneously strengthen the center’s capacity for control.

By 2000, as a direct result of the Golden Projects, every province, autonomous region, and municipality across the country had established an office automation system (an intranet) connected to a State Council hub.¹²⁴ Since that time, the Golden Projects have allowed for the initial development of the “unified planning,” “unified standards,” “unified coordination,” and “unified deployment” of policies driving informatization of government departments across the country.¹²⁵

With the advancement of basic e-governance, the integration of information created a capacity for improved data collection and improved data management, which all enhance decision-making capacity. This directly benefits the social management process. The next step in using technology to improve decision-making was focused on grid policing, which was implemented in various cities and towns across China by no later than the 2001-2002 timeframe.

Grid Management

It is sometimes assumed that Xinjiang is the testbed for the use of technology applied to social control; however, this is largely untrue even if particular technologies used in Xinjiang are not used elsewhere or are not yet quite as visible elsewhere. For instance, Tibet and Xinjiang under Chen Quanguo were not the origin of the expansion of grid management; instead they are the places where grid management most visibly enhanced the CCP’s coercive control methods.

Grid policing was characterized mostly by enhanced monitoring and surveillance and more efficient data sharing within a designated area and within public security bureaus. One of the first

¹²³ Chengsheng Wang (ed.) "China E-Government Development Report No. 2 [中国电子政务发展报告 No. 2]" in "Blue Book of Electronic Development [电子政务蓝皮书]", 134. Beijing, Social Sciences Academic Press, 2005.

¹²⁴ Xu and Zhou, "Analysis and Forecast on China's Informatisation (2010) [中国信息化形势分析和预测 (2010)].

¹²⁵ Ying Li (ed.), "Report on China's Software and Information Service Industry (2011) [中国软件和信息服务业发展报告 (2011)]" in *Blue Book of Software and Information Service Industry* [软件和信息服务业蓝皮书] 73, Beijing, Social Sciences Academic Press, 2011).

openly reported examples of modern grid-ized (网格化) policing was in Shanghai.¹²⁶¹²⁷¹²⁸ It was described as a development that allowed preventative police actions to move from acting as a “passive force” to acting as an “active force.” As a result, it was described as enabling a move from a “static” system of management to a “dynamic” system of management.¹²⁹

Developments in the early 2000s would further expand the effort. Within a few years, the more encompassing “grid management” (网格化管理) began to publicly emerge as a concept. Grid management enables the organization of data to generate better awareness of the local operating environment and, as a result of the integration of information, improve predictive capacity and enhance the tracking and monitoring of individuals or problems (i.e. pollution).¹³⁰

Grid management describes the physical and virtual separation of urban areas. Grid management represents the initial effort to integrate technology to support the whole social management process. It can support everything from early-warning to enhancing emergency response. A 2006 *People's Daily* article said:

[We] should establish a public sentiment collection and analysis mechanism through improving e-government and important information systems, thus strengthening [our] capability to maintain social stability and increase the standard of social management; utilize information technology to establish an ‘emergency response logistical mobilisation command system’ and social warning system, forming an emergency response mechanism with a unified command, comprehensive function, agile reactions, efficient operation, to raise the capacity for protection of public security and emergency handling; attach importance to improving the ‘Golden Shield’ project, and improving the

¹²⁶ Lei Mao, "Social Security and Order Remain Steady; the Prevention and Control Capacity has Improved; the Number of Serious Criminal Cases in Shanghai have Decreased [社会治安保持平稳防控能力得到提高上海严重刑事犯罪发案数下降]," *The People's Daily*, 3 August 2001.

¹²⁷ Jinyi Zhao, "The Revelation of Shanghai's Public Security [上海治安启示录]," *The People's Daily*, 22 August 2001. <http://www.people.com.cn/GB/shehui/43/20010822/540826.html>

¹²⁸ Ye Yang, "Successful Implementation of Strict Law and Order Prevention and Control -- Accounts of Shanghai Police Striking the Streetside 'Two [kinds of] Robberies' [严密治安防控的成功实践——上海警方打击街面“两抢”犯罪纪实]," *The People's Daily*, 14 August 2002. <https://rnrp.online/simple/?t1295238.html>

¹²⁹ Wenke Xin, "Satisfy the People [让人民满意]," *The People's Daily*, 14 August 2002.

¹³⁰ Jie Li and Changrong Qu, "The Police Force Goes Grassroots; Grid Deployment of the Force; Scientifically Strengthen the Force; Zhengzhou Building a Sturdy Social Security Prevention and Control System, For the First Eight Months This Year, Criminal Cases Have Declined by Twenty Percent [警力下沉 网格布警 科技强警 郑州筑牢社会治安防控体系 今年前八月各类刑事案件同比下降两成多]," *The People's Daily*, 15 October 2006.

*informatization level of CMPS works, strike against all kinds of illegal activities, and ensure people's lives and property are safe.*¹³¹

Recent developments in information integration include grid management-linked unified command platforms that support not only problem identification but also emergency response mechanisms for emergencies of all varieties. For example, in 2017, CPLC Secretary Meng Jianzhu visited Changsha South Railway Station, a transportation hub with a joint logistical and joint mobilisation command center. The center has “flat” command systems, a joint services mechanism, and video surveillance technology. Meng said the joint logistical and joint mobilization system solved communication problems with information resources, strengthened the “whole combat ‘joint’ mechanism,” and realized targeting procedures. He said the command center exemplified the technological concept related to the comprehensive governance of social order.¹³² Additionally, Meng said:

*We hope that they will play a role in coordinating, further concentrating the power of resources, establishing a robust information sharing, unified command, and cooperative combat mechanism, constantly improving the reaction speed and capacity, and strive to locate all kinds of security risks early, preventing them in advance, and with minimum effort.*¹³³

In September 2017, General Party Secretary Xi Jinping called for: “a more systematic and innovative social governance, stressing the need to improve the capability to predict and prevent security risks.”¹³⁴ Moving on from grid management, the Party is looking to achieve this innovation in areas like the development of “smart cities” or “safe cities” in China.¹³⁵ These will combine technologies, ranging from surveillance cameras, sensors, radio-frequency identification, and GPS, to sense, measure, and capture data from anywhere in a city. The idea is that the sharing and integration of information resources and data will improve the government’s

¹³¹ Renzhou Xin, "Fully Realizing the Effect Informatisation Has on Raising Governance Capacity [发挥信息化对提高执政能力的作用]", *The People's Daily*, 4 June 2005.

<http://theory.southcn.com/llzhuanti/znl/ltt/200506080733.htm>

¹³² "Meng Jianzhu: Continuously Improving Social Governance's Scientific(-isation), Rule of Law(-isation) and Intelligence(-isation) Standards [孟建柱：不断提高社会治理科学化法治化智能化水平], *Xinhua*, 24 March 2017. http://www.xinhuanet.com/politics/2017-03/24/c_1120691230.htm

¹³³ *Ibid.*

¹³⁴ Yan Zhang. "Security Innovation Seen as Crucial." *China Daily*, 20 September 2017. http://www.chinadaily.com.cn/china/2017-09/20/content_32225951.htm

¹³⁵ For instance, see: China Electronics Standardization Institute. "China Smart City Standardisation White Paper [中国智慧城市标准化白皮书]" July 2013. http://www.cac.gov.cn/2014-09/28/c_1112661626.htm

capacity to analyze and handle complex situations in governance, thus improving the CCP's decision-making ability.

Conclusion

As technology enhances the Party's capacity to identify problems, support decision-making, and improve response, it is also attempting to use technology to prevent problems from emerging at all. Social management is the management of the entire society and also a management that is participated in by the entire society. As such, social management as a concept has always included a form of public "participation" in social management. The projects in problem identification, decision-making, and response also support the Party's effort to encourage participation in social management. This effort is most clear in the construction of China's social credit system.

Technology, however, is not a completely game-changing solution to the CCP's power problem. The obstacles to ensuring the Party's power that have long-existed, mostly centered around the lack of rule of law and corruption, do not disappear because of technology. In fact, technology may encourage further abuse. Technology might increase the Party's ability to control society, but it may also worsen the impact of the contestation for power within the Party.

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