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Robert Schuman Centre for Advanced Studies
Global Citizenship Governance

How to Make the Perfect Citizen?
Lessons from China's Model of Social Credit System

Liav Orgad and Wessel Reijers

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Global Citizenship Governance

The project explores the international norms and structures for granting citizenship. It has six objectives: [1] to investigate the history of naturalisation and what it can teach us about 21st century challenges; [2] to identify the recent legal developments and establish the most up-to-date legal standards in the field of naturalisation law that, taken together, may form the basis for ICIL; [3] to set out the theoretical foundations and the justifications for the establishment of ICIL; [4] to analyse the normative and structural implications derived from an-ICIL approach for future citizenship policy development; [5] to examine the future of citizenship – how technology can and should remodel the way citizenship is governed; and [6] to explore the interrelationship between ICIL, global migration, and constitutional identity. In essence, the project seeks to formulate international standards by which states can admit migrants without fundamentally changing their cultural heritage and slipping into extreme nationalism. The outcome can serve as a basis for a future reform in international law, EU law, and national legal systems.

For more information: <http://global-citizenship.eui.eu>.

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Abstract

The Covid19 crisis has triggered a new wave of digitalization of the lives of citizens. To counter the devastating effects of the virus, states and corporations are experimenting with systems that trace citizens as an integral part of public life. In China, a comprehensive sociotechnical system of citizenship governance has already in force with the implementation of the Social Credit System—a technology-driven project that aims to assess, evaluate, and steer the behavior of Chinese citizens.

After presenting social credit systems in China's public and private sectors (Part I), the article provides normative standards to distinguish the Chinese system from comparable Western systems (Part II). It then shows the manner in which civic virtue is instrumentalized in China, both in content ("what" it is) and in form ("how" to cultivate it) (Part III), and claims that social credit systems represent a new form of citizenship governance, "cybernetic citizenship," which implements different conceptions of state power, civic virtue, and human rights (Part V). On the whole, the article demonstrates how the Chinese Social Credit System redefines the institution of citizenship and warns against similar patterns that are mushrooming in the West.

The article makes three contributions: empirically, it presents China's Social Credit Systems and reveals their data sources, criteria used, rating methods, and attached sanctions and rewards. Comparatively, it shows that, paradoxically, China's Social Credit System is not fundamentally different than credit systems in Western societies, yet indicates four points of divergence: scope, authority, regulation, and regime. Normatively, it claims that China's Social Credit System creates a form of cybernetic citizenship governance, which redefines the essence of citizenship.

Keywords

Citizenship Governance; China; Social Credit System; Civic Virtue; Cybernetic Citizenship

Introduction*

Imagine a world where your daily activities are constantly watched and recorded: what you buy, whether you volunteer in the community, how often you visit your parents, who your close friends are, where you travel, and when you pay your bills. The aggregated data are processed and assessed for developing rankings and scores for you and your fellow citizens. The ranking indicates whether you are a “good” or a “bad” citizen. A high ranking is rewarded while a low ranking may be sanctioned. The ranking also affects your interactions with government and private agencies; it is publicly known so that people can check it before they contact you, date you, or decide to do business with you. And although you are aware that you are constantly being rated, the data sources, criteria used, and scoring methods are largely unknown.

In 2014, the Communist Party of China introduced a plan to construct a “Social Credit System” (社会信用体系).¹ It intends to use technological innovation to establish a unified system that rates citizens for improving social order and public trust. Although one cannot speak yet of a Social Credit System, China aims to create a comprehensive ecosystem by the end of 2020, where all citizens² are rated based on a national credit database. The system should cover most, if not all, aspects of civic life: commerce, finance, taxation, employment, education, transportation, housing, scientific research, and sports—almost everything that a person leaves a footprint, physical or digital. It promises to reward “model individuals keeping trust,” and impose punishments for breach of trust by “blacklist systems and market withdrawal mechanisms.”³ In order to keep trust, a person should obey the law and follow “professional ethics and behavioral norms.” The overall idea is to forge public policy in which “keeping trust is glorious and breaking trust is disgraceful.”⁴

The article analyzes social credit systems from the perspective of Western citizenship. Thus far, scholarly discussions have largely ignored the impact of emerging technologies on the institution of citizenship. This neglect is remarkable given the increasing speed at which emerging technologies are entangled in the development of new forms of citizenship governance. The intellectual grounds of existing citizenship regimes have been developed long before the rise of automated systems and, therefore, have not engaged with what can be termed “cybernetic citizenship.” Against this backdrop, the article presents a comparison of how technologies redefine the essence of citizenship in China and

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¹ “Planning Outline of the Construction of a Social Credit System (2014-2020),” the State Council, June 14, 2014 (hereinafter: “State Council Agenda”), available at http://www.gov.cn/zhengce/content/2014-06/27/content_8913.htm (English translation is available at <https://chinacopyrightandmedia.wordpress.com/2014/06/14/planning-outline-for-the-construction-of-a-social-credit-system-2014-2020/>).

² The article focuses on Chinese *citizens*, although social credit systems in China also target noncitizens, companies, organizations, and other legal entities. The term “citizen” is used not in the formal sense of legal status (e.g., citizens living abroad are not part of the system) but, instead, as membership in a political community and being subjected to its jurisdiction.

³ State Council Agenda, *supra* note 1, at V(1).

⁴ State Council Agenda, *supra* note 1, at I(3).

the West—what it is, and what can (and should) it be. China’s Social Credit System is a unique case as it represents one of the most ambitious attempts in history to use sociotechnical means to produce “perfect citizens.” It demonstrates not only how new technologies transform citizenship values and institutions, but also indicates future directions of citizenship governance that implement fundamentally different conceptions of freedom, privacy, and due process, and undermine one of the most significant achievements of the Enlightenment—the Kantian-rooted idea that human beings should be treated as an end in themselves, and not merely as a means to achieve public goods.

The article proceeds as follows. *Part I* is empirical: it describes social credit systems in China at different levels—national, local, private—and identifies their data sources, criteria used, rating methods, and sanctions and rewards attached to them. *Part II* is comparative: it analyses similarities and differences between social credit systems in China and scoring and rating systems in Western societies. It suggests four points of divergence: scope (is the system all-encompassing or limited in terms of topics and applications to one field?), authority (is the system centralized or decentralized, private or public?), regulation (is the system driven by the law or also be morals and markets?), and regime type (is the system part of a democratic regime?). *Part III* is theoretical: it uses Western theories of civic virtue (republicanism, communitarianism, and liberalism) to investigate the conception of civic virtue promoted by the Social Credit System. The claim is that China’s Social Credit System incorporates an instrumental understanding of civic virtue, and a technical approach for cultivating it—a unique combination from a Western perspective. *Part IV* is normative: it argues that China’s social credit systems can be seen as a form of cybernetic citizenship governance that changes the essence of citizenship and the political role of the state, and examines three normative concerns it raises when applied in liberal democracies. Overall, the article invites the readers to reflect on challenges and opportunities brought about by rapidly developing systems of sociotechnical citizenship governance.

I. Social Credit Systems in China

There is no commonly accepted definition of a social credit system. Generally, it is a form of governance that systematically collects information on societal actors (input), processes the data to rate them according to some categories (throughput) and, based on a system of carrots and sticks, aims to incentivize a certain type of behavior (output). Each actor is watched and recorded, assessed and rated, and either rewarded or punished. A social credit system is not necessarily linked to technological progress, yet recent attempts to implement it present a new generation of systems that aim to develop a scientific understanding of society through the use of emerging technologies.

In recent years, social credit systems are mainly discussed with reference to China. The Chinese project has become infamous in the West and been portrayed by Western media as the world’s first “digital dictatorship” and a means of Orwellian control.⁵ Despite the reports on a Social Credit System, a unified national system does not exist (yet) in China. And still, some forms of social credit systems, which are developed and implemented in China, provide adequate information to understand the system’s goal, function, and outcome. Overall, three types of systems are in place. First, there is the national system of “blacklists” curated by the government. If citizens are blacklisted, they can be limited in the type of services and goods they have access to. Second, over a dozen pilot projects of social credit

⁵ Matthew Carney, “Leave No Dark Corner,” *ABC News*, September 19, 2018; “Big Data and Government: China’s Digital Dictatorship,” *The Economist*, December 17, 2016; “Big Data, Meet Big Brother: China Invents the Digital Totalitarian State,” *The Economist*, December 17, 2016; Nicholas D. Kristof, “China’s Orwellian War on Religion,” *New York Times*, May 22, 2019; Jamie Horsley, “China’s Orwellian Social Credit Score Isn’t Real,” *Foreign Policy*, November 16, 2018; Robert Foyle Hunwick, “How Do You Control 1.4 Billion People?” *The New Republic*, April 25, 2018 (terming the Chinese system as a “form of high-tech Stalinism”); Nicholas Wright, “How Artificial Intelligence Will Reshape the Global Order,” *Foreign Affairs*, July 10, 2018 (“digital authoritarianism”); “Remarks by Vice President Pence on the Administration’s Policy Toward China,” *The White House*, October 4, 2018 (“China’s rulers aim to implement an Orwellian system premised on controlling virtually every facet of human life — the so-called ‘Social Credit Score’”).

systems exist at the sub-national levels—all are diverse in terms of design and implementation. And third, there are private⁶ and commercial initiatives, such as the Zhima (or Sesame) Credit.

At the *national* level, the social credit initiative connotes what is known as the “joint punishment system.”⁷ This system revolves around notions of redlists and blacklists, which are lists of “trustworthy” citizens, who should be rewarded, and “untrustworthy” citizens, who should be sanctioned. A great number of government agencies have created their own blacklist and signed a memorandum of understanding to exchange information. Data sharing between government agencies, and between them and the private sector,⁸ allows the implementation of joint punishments against trust-breaking acts. The aim is to restrict people who fail to carry out legal obligations originating from court orders and administrative decisions or commit grave actions.⁹ At the national level, people are not strictly speaking scored but are categorized into “black” and “red” lists. The categorization has serious consequences. Blacklisted people face “restrictions on leaving the borders ... [and] on the purchase of immovable property, traveling on aircraft, traveling on high-class trains and ... staying in star-ranked hotels.” In addition, commercial banks, insurance companies, and financial bodies are guided to raise the rates of “gravely trust-breaking subjects, or limit their provision of loans, recommendations, sales, insurance and other such services.”¹⁰ Consequences for being on a blacklist include restrictions in buying stocks, applying for civil service jobs, and accessing public places. In 2018, for example, over 17.5 million tickets for flights and high-speed trains were blocked.¹¹

The national Social Credit System also affects social reputation. One example is shaming.¹² In 2014, the State Council Agenda encouraged judicial bodies to publish a list of willful defaulters on the Credit China website.¹³ Such a list, first created by the Supreme People’s Court in 2013,¹⁴ serves to track down people who do not comply with court orders.¹⁵ It means that blacklisted people appear with their name

⁶ Zhima Credit (and similar programs) is classified as a “private” system although it can be questionable because the Social Credit System is a government initiative, and Zhima’s level of autonomy in the design and implementation of the system is limited. The actual operation is more approximate to a government-outsourcing contract than to a private initiative.

⁷ “Guiding Opinions of the State Council on Establishing and Improving the System of Joint Incentive for Keeping Faith and Joint Punishment for Losing Faith and Accelerating the Advancement of the Development of Social Honesty,” the State Council, May 30, 2016 (hereinafter: “State Council Guidelines”), *available at*

http://www.gov.cn/zhengce/content/2016-06/12/content_5081222.htm (English translation is *available at* https://pkulaw.com/en_law/ed2505ae7122f497bdfb.html).

⁸ State Council Guidelines, *supra* note 6, at IV (19). As for 2019, 42 memoranda for data sharing and joint punishments have been signed by government bodies, and between them to commercial organizations and local agencies. A survey of the memoranda is *available at* <http://www.credlink.com/show-107.html> (English translation of several memoranda is *available at* <https://www.chinalawtranslate.com/en/social-credit-documents/>).

⁹ State Council Guidelines, *supra* note 6, at III (9) (specifying a list of grave offenses).

¹⁰ State Council Guidelines, *supra* note 6, at III (11). *See also* “Opinions Concerning Accelerating the Construction of Credit Supervision, Warning and Punishment Mechanisms for Persons Subject to Enforcement for Trust-Breaking,” State Council General Office, October 7, 2016 (hereinafter: “Warning and Punishment Mechanisms”), *available at* http://www.gov.cn/zhengce/2016-09/25/content_5111921.htm.

¹¹ Lily Kuo, “China Bans 23m from Buying Travel Tickets as Part of ‘Social Credit’ System,” *The Guardian*, March 1, 2019.

¹² There are cultural differences in the way shaming is considered in China compared to the West. *See, e.g.*, Olwen Bedford and Kwang-Kuo Hwang, “Guilt and Shame in Chinese Culture: A Cross-cultural Framework from the Perspective of Morality and Identity,” 33 *Journal for the Theory of Social Behaviour* 127 (2003).

¹³ State Council Agenda, *supra* note 1, at II (3).

¹⁴ The Supreme People’s Court issued a national list of “dishonest persons,” who are obliged and capable to comply with court orders and administrative decisions yet fail to do it. *See* Interpretation No. 17 [2013] of the Supreme People’s Court, July 16, 2013, *available at*

<http://gongbao.court.gov.cn/Details/1c0baa9e69e6a21c809886144354b1.html>.

¹⁵ “Provisions on the Publication of a List of Trust-Breaking Persons, the Supreme People’s Court, February 28, 2017, *available at* <http://www.court.gov.cn/fabu-xiangqing-37172.html>.

on the website of the Supreme People's Court.¹⁶ The High People's Court of Hebei Province even announced a mini program (similar to an app) in WeChat, "Laolai Map," where people can check if there are blacklisted people around them ("Laolai" means willful defaulter).¹⁷ Alerting against untrustworthy people nearby is done not only through online platforms but also through newspapers and street billboards. And in some cities, courts work together with local phone companies to have a ringtone that alerts callers that a person has been blacklisted.¹⁸ The motto is "trust-breaking in one place, restrictions everywhere" (一处失信、处处受限).¹⁹

At the *local* level of government, there are dozens of pilot programs. The first pilot was initiated in 2010 in Suining, a city of Jiangsu Province. It provided every citizen with 1000 starting points. People could lose points for traffic violations or earn points for looking after the elderly. Rewards for high scores contained priorities in access to job applications and top schools, while sanctions for low scores contained restrictions in social services. This pilot was criticized and abandoned.²⁰ Another pilot exists in Rongcheng, a city of Shandong Province. In this scheme, people are given 1,000 points as a first step; from here, the play begins. The county-level city publishes a yearly Social Credit Information Collection Catalogue, which lists 150 positive and 570 negative actions as a guiding framework for residents.²¹ Points can be deducted for throwing cigarette butts in public places or selling fake products. Serious offenses, such as employing children under the age of 16 and forcing people to work in hot temperatures, lead to the blacklist. Conversely, points can be earned for donating to a charity and committing a heroic act. The score scale is between ++A (>1,050) and D (<600, a blacklist).²² A D-category means restrictions on public finance, employment, and welfare. Rewards for a high score can include cheaper utilities and health care or better bank loans.

Local initiatives demonstrate the nexus between emerging technologies and social credit systems. In Shenzhen, facial recognition technology has been integrated into the traffic system, which allows the detection of petty crimes such as jaywalking. Jaywalkers can be publicly shamed on screens and their score can be reduced.²³ Hangzhou, the capital of Zhejiang Province, has a smart-ID card where users are identified by facial recognition for multiple purposes, from paying for public transport to getting social security funds. Other initiatives, however, are low-tech. In the villages of Jiakuang Majia, the system operates with pens and papers.²⁴ Some practices are reminiscent of the old GDR (German Democratic Republic), illustrated by civil servants going around villages with assessors to collect information. The role of the information collectors is to watch and record the life of the residents. If they

¹⁶ The list is available at <http://zxgk.court.gov.cn/shixin/>.

¹⁷ Gu Mengdong, "Laolai Map Appeared in the Summit of Establishing A Digital China," *Hebei Legal Newspaper*, May 10, 2019, at 01, available at <http://www.hebeicourt.gov.cn/public/detail.php?id=31216>.

¹⁸ "Ringtone of Shame Rings Bell for Debtors in East China," *China Daily*, July 30, 2017; Marianne von Blomberg, "The Social Credit System and China's Rule of Law," 2 *Mapping China Journal* 77 (2018), at 91.

¹⁹ "Opinions on Accelerating the Development of a System of Credit Supervision, Warning and Sanctions for Trust-Breakers on the Defaulters' Lists," the General Office of the Communist Party of China, September 25, 2016, available at http://www.xinhuanet.com/politics/2016-09/25/c_1119620719.htm.

²⁰ Simina Mistreanu, "Life Inside China's Social Credit Laboratory," *Foreign Policy*, April 3, 2018.

²¹ Adam Knight, "Local Piloting of China's Social Credit System," Oxford Internet Institute, 2018 (on file with the author). Similar catalogs exist in other places, such as Shanghai. See Yongxi Chen and Anne SY Cheung, "The Transparent Self under Big Data Profiling: Privacy and Chinese Legislation on the Social Credit System," 12(2) *Journal of Comparative Law* 356, 359 (2017).

²² Knight, *supra* note 21 (in Gangwan, one can earn points for sweeping snow (+1), clearing vegetation (+1), establishing a community group (+10), and looking after the elderly (+2). Similarly, one can lose points for gambling (-20), abusing children (-50), mistreating a dog (-10), cutting down trees (-50), exceeding burial restrictions (-100), public quarrelling (-20), burning rubbish (-5), WeChat rumors (-50), and selling superstitious items (-10)).

²³ Sophia Yan, "China Uber-Rates its Citizens," *The Telegraph*, May 30, 2019.

²⁴ "Is China's Social Credit System as Orwellian as it Sounds?" *MIT Technology Review*, February 26, 2019.

do something “good,” such as helping the elderly, they can get a boost; if they do something “bad,” such as leaving trash in hallways, they can lose points.²⁵

As for 2019, there are more than forty municipal and district social credit pilots in China. Local pilots, especially the 12 “model cities” chosen by the National Development and Reform Commission,²⁶ provide an opportunity to observe lessons on a future unified Social Credit System.²⁷ In some cities, the system targets actions that in a Western perspective may be regarded “private,” such as visiting one’s elderly parents (In China, there is a legal obligation to visit one’s parents older than 60²⁸ and, in general, the line between private and public life, as well as the essence of privacy, has a different meaning compared to Western societies). In addition, local codes of “good conduct” contain both legal rules and common social norms. In Qingshan, for instance, the system includes items such as “being rude to neighbors, and showing off in fancy cars at weddings and funerals.”²⁹ In some areas, there are photos of residents with a high score displayed outside the city hall and public libraries.

Next to national and local programs, *private* companies have extensively experimented with social credit scoring. In 2006, the People’s Bank of China initiated the Credit Reference Center.³⁰ The goal was to create a centralized consumer credit reporting system to assess the financial credibility of individuals and legal entities. In 2014, following the release of the State Council Agenda, a national plan to establish a Social Credit System that goes beyond financial credit information, to assess whether a person is trustworthy in the public eye, was announced. This has been the background for the development of private pilots.³¹ From 2015 to 2018, eight private companies implemented such pilots: Sesame Credit, Kaola Credit, Qianhai Credit, Intellicredit, Sinoway Credit, Pengyuan Credit, China Chengxin Credit, and Tencent Credit.³² Starting in 2018, these companies—each has different data sources, scoring methods, and functional goals—have joint forces to create Baihang Credit (百行征信

²⁵ Severin Engelmann et al., “Clear Sanctions, Vague Rewards: How China’s Social Credit System Currently Defines ‘Good’ and ‘Bad’ Behavior,” FAT* 19: Conference on Fairness, Accountability, and Transparency (FAT* 19), January 29–31, 2019, Atlanta, GA, USA.

²⁶ The 12 prototype cities are Chengdu, Hangzhou, Huizhou, Nanjing, Rongcheng, Suzhou, Suqian, Wenzhou, Weihai, Xiamen, and Yiwu. See National Development and Reform Commission and People’s Bank of China, “Notice of Publicizing the List of the First Batch of National Model Cities of Establishing the Social Credit System,” December 28, 2017, available at http://www.gov.cn/xinwen/2018-01/09/content_5254715.htm.

²⁷ Mareike Ohlberg, Shazeda Ahmed, and Bertram Lang, “Central Planning, Local Experiments: The Complex Implementation of China’s Social Credit System,” *Mercator Institute for China Studies*, December 12, 2017, 3 (bringing details on pilots in Zhengzhou, Wuhan, Luzhou, Rongcheng, and Shanghai); China Law Translate (bringing details on pilots in Hubei, Zhejiang, Shanghai), available at <https://www.chinalawtranslate.com/en/giving-credit-2-carrots-and-sticks/>.

²⁸ Art. 18 of the *Law of the People’s Republic of China on the Protection of the Rights and Interests of the Elderly*, available at http://www.moj.gov.cn/Department/content/2019-01/17/592_227062.html; English translation is available at https://pkulaw.com/en_law/60ff5933d32dc7ccbdfb.html. For interpretation of this duty, see, e.g., Wang Mou 1, Wang Mou 2 Shanyang Jiufen (王某1、王某2赡养纠纷) [Wang v. Wang] (Xuchang Intern. People’s Ct. Dec. 24, 2019) (China), available at <https://www.pkulaw.com/pfnl/a6bdb3332ec0adc4a0aef30c641f2935e9156e4dd945a39fbdfb.html>.

²⁹ René Raphael and Ling Xi, “Discipline and Punish: The Birth of China’s Social-Credit System,” *The Nation*, January 23, 2019.

³⁰ China’s Credit Reference Center is available at <http://www.pbccrc.org.cn/crc/>.

³¹ Zhuo Huang, Yang Lei, and Shihan Shen, “China’s Personal Credit Reporting System in The Internet Finance Era: Challenges and Opportunities,” 9(3) *China Economic Journal* 288 (2016).

³² “Notice concerning Accomplishing Preparatory Work for Personal Credit Reporting Business Activities,” January 5, 2015, available at http://www.gov.cn/xinwen/2015-01/05/content_2800381.htm.

有限公司) as a unified platform of big tech companies and the Chinese government.³³ The connection between Baihang Credit and the planned national social credit system in 2020 is not yet clear.³⁴

Sesame Credit, the credit rating of the online retail giant Alibaba, is the best-known private platform. Launched in 2015, it tracks the behavior of Ant Financial's millions of users, who have signed up the program (although there are strong incentives to sign up, it is voluntary), and rates them. The system is part of Ant Financial Services Group, an affiliated company of Alibaba. Data sources mostly rely on Alipay, the world's largest online payments platform (with almost 900 million users, larger than PayPal). Using its subsidiaries, Ant Financial also has data on loans (Ant Cash Now), insurance (Ant Insurance Services), wealth (Ant Fortune), and biometrics (ZOLOZ). The data allow to assess people based on five categories: 1) payment/credit history, 2) contractual capacity, 3) behavior (such as shopping habits³⁵ or travel data), 4) personal character (such as age, job, salary, and education), and 5) social relations (such as social networks). The algorithm, however, is secret—the criteria, and their relative weight in the overall assessment, are unknown. The outcome of the assessment is a score ranging between 350 and 950. A low score leads to restrictions—slow internet speeds, limited access to clubs and jobs, low chance to get loans, mortgages, and insurances, and even limited access to public toilets that work on facial recognition. A high score leads to commercial privileges—low-interest loan, priority booking of taxis or deposit-free bike and car rentals, free use of umbrella sharing services, discounted mobile phone rates, coupons for shopping, and fast-track visa to designated countries at airports.³⁶ A high score signals wealth and prosperity. Interestingly enough, it has not gone unnoticed in the Chinese dating scene. The Baihe dating service (百合网) is linked up with Sesame credit scores, allowing people to judge one another also based on the social credit score.³⁷ To a large extent, the Sesame Credit looks like gamification of citizenship.³⁸

Reviewing social credit initiatives in China teaches several lessons. *First*, there is no unified Social Credit System, but multiple systems: national, local, and private. It is an ecosystem, consisting of multiple sub-systems—each has different data sources, scoring criteria, forms of assessment, and normative outcomes³⁹—that increasingly converge on a common goal. Importantly, “scoring” is not a feature of all systems, with the most important ones (the national black- and red-lists) assigning a status rather than a score. Western media reports about a unified system that inspects every aspect of life and generates a score for every citizen are exaggerating and mostly incorrect. Nuances exist not only on different government levels and regions but also on functions: administrative, commercial, societal, and

³³ “Public License Information Form of Establishing Institutions Operating Individual Credit Investigation Business,” The People's Bank of China, February 22, 2018. Baihang Credit is *available at* <http://www.baihangcredit.com/index.html>.

³⁴ The system may eventually be divided into two credit systems: financial (经济信用) and moral (道德诚信). See Lu Wang, “Violations of Laws Cannot be Equal to Dishonesty: On the Clarification of the Divergence of the Establishment of Social Credit System,” *Caixin*, March 31, 2020, *available at* <http://opinion.caixin.com/2020-03-30/101535820.html>.

³⁵ Celia Hatton, “China 'Social Credit': Beijing Sets up Huge System,” *BBC News*, October 26, 2015 (“Someone who plays video games for 10 hours a day, for example, would be considered an idle person, and someone who frequently buys diapers would be considered as probably a parent, who on balance is more likely to have a sense of responsibility,” Li Yingyun, Sesame's technology director told *Caixin*, a Chinese magazine, in February”).

³⁶ Yi Cai, “An Introduction to the Credit Structure of Zhima Score (Part II),” *Zhihu* (July 24, 2016), *available at* <https://zhuanlan.zhihu.com/p/21697124>; Zhima Service Agreement (芝麻服务协议), *available at* <https://ds.alipay.com/zmxy/tb agreement.htm>. See also Shazeda Ahmed, “The Messy Truth About Social Credit,” *Logic 7*, May 1, 2019; Genia Kostka, “What Do People in China Think About ‘Social Credit’ Monitoring?” *Washington Post*, March 21, 2019; Many Koetse, “Open Sesame: Social Credit in China as Gate to Punitive Measures and Personal Perks,” *Weibo*, May 27, 2018; Jeremy Daum, “The Redlists are Coming! The Blacklists are Coming!” *China Law Translate*, March 30, 2018.

³⁷ Hatton, *supra* note 33.

³⁸ Andrzej Marczewski, “The Ethics of Gamification,” 24(1) *XRDS* 56 (2017); Zahy Ramadan, “The Gamification of Trust: The Case of China's ‘Social Credit’,” 36(1) *Marketing Intelligence & Planning* 93 (2018).

³⁹ Xin Dai, “Toward a Reputation State: The Social Credit System Project of China,” 2018, 24-39, *SSRN*, Ocean University of China (focusing mainly on reputation mechanisms).

judicial, each operates separately and has distinctive features. And even though the different systems include both rewards and sanctions, in most cases, only rewards are strictly speaking extralegal, while sanctions are mostly related to breaking the law.

Still, there are alarming features in the systems that operate in China. The most basic one is the method that combines 1) data aggregation on a wide range of topics, 2) data sharing between government departments and private organizations, 3) joint punishment systems implemented by these entities, 4) shaming mechanisms, which publicly denounces willful defaulters, often by displaying their name and photo,⁴⁰ and 5) wide outcome that goes beyond the original “wrongdoing.” More alarming is the potential use of surveillance technologies in some pilots, which has become a general feature of the system.

Second, studies show a high public approval of social credit systems, especially among “wealthier, better-educated, and urban residents.” Such systems are perceived as “useful tools to make individuals and companies more honest and accountable for their actions,” and as mechanisms to improve “ethical conduct in Chinese society and economy.”⁴¹ Chinese media, too, positively portray the social credit system as a favorable development.⁴²

Third, the goals of the system are disputed. Western media portrays it as a means of surveillance, rooted in a history of social control in China.⁴³ And yet, China insists that the goals of the national system are different—creating a culture of integrity and trust in four policy areas: judicial integrity (enforcing court orders), government integrity (fighting corruption in public institutions), commercial integrity (reducing business dishonesty⁴⁴), and societal integrity (strengthening trust within society).⁴⁵ The system is mainly geared toward legal compliance—issues such as tax evasion, non-payment of administrative fees, food safety violations, and failures to follow judicial orders and contract obligations—although it also concerns with a supposed moral decline in civic society and a rapid economic growth in China. For instance, 225 million citizens have no bank account,⁴⁶ and a Social Credit System can enable people with no credit history to participate in the economy.

The outbreak of coronavirus in China shows the widening scope of the Social Credit System. On January 31, 2020, the People's Bank of China and other government departments issued a notice concerning the coronavirus and the Social Credit System.⁴⁷ People who have lost their source of income due to the coronavirus are granted a repayment schedule; unpaid bills are not negatively affecting the social credit score. People devoted to the public good, demonstrated by volunteering to help during the coronavirus period, are listed in a “Joint Incentive List” and incited administratively, commercially,

⁴⁰ In some cases, courts further disclose willful defaulters' address (住址). See, e.g., “The Latest Batch of Willful Defaulter in Hebei! Names, Addresses and Photos!” *The Paper* (March 5, 2020), available at https://www.thepaper.cn/newsDetail_forward_6350510.

⁴¹ Genia Kostka, “China's Social Credit Systems and Public Opinion: Explaining High Levels of Approval,” 21(7) *New Media & Society* 1565 (2019), 1565, 1573, 1568, respectively.

⁴² Ohlberg, Ahmed, and Lang, *supra* note 27; Manya Koetse, “10 State Media Cartoons on China's Social Credit Implementation,” *China Insight*, July 20, 2018.

⁴³ Samantha Hoffman, “Programming China: The Communist Party's Autonomic Approach to Managing State Security,” *Mercator Institute for China Studies*, December 12, 2017.

⁴⁴ Engelmann et al., *supra* note 25, at 2 (“It is estimated that Chinese enterprises suffer from a loss of 600 billion RMB (around 92 billion USD) per year due to dishonest activities”).

⁴⁵ State Council Guidelines, *supra* note 6; Ohlberg, Ahmed, and Lang, *supra* note 27, at 6.

⁴⁶ Engelmann et al., *supra* note 25, at 2.

⁴⁷ “Notice on Further Strengthening Financial Support for the Prevention and Control of the Outbreak of Pneumonia Caused by Novel Coronavirus,” People's Bank of China, January 31, 2020, available at http://www.gov.cn/zhengce/zhengceku/2020-02/01/content_5473639.htm.

and socially.⁴⁸ At the same time, concealing medical history (or travel history in infected regions or contact with infected people) and refusing quarantine can lower the social credit score and place one's on a blacklist in Shanghai and other cities.⁴⁹ In Hunan, scores can be reduced for actions such as spreading incorrect rumors or driving up the prices of social goods and medical supplies.

Fourth, it is unclear how effective the system is in promoting its declared goals. Anecdotal evidence indicates that, under a social credit system, people are more likely to stop in front of crosswalks, keep the streets clean, and visit their parents. A book released by Ant Financial employees shows that 46 percent of Sesame Credit users paid their debt after being blacklisted.⁵⁰ In Rongcheng, there has been a 23 percent decrease in criminal cases, an 18 percent drop in public order offenses, and a 40 percent decline in "uncivilized" behavior.⁵¹ This trend, the government hopes, will lead to a trust-based society.

II. China and the West

How unique is China's Social Credit System? Is it really different from national, municipal, and commercial credit systems in Western societies? To a certain extent, there are similarities between China and the West. Most credit systems systematically collect data⁵² and have some (diverse) form of surveillance and assessment, which leads to some sort of classification and scoring. Most credit systems have control, management, and behavior change as primary goals, even if other goals are included. Most credit systems seek to construct norms and values. In both China and the West, social credit systems are sometimes voluntary (a person needs to sign in and can opt-out based on consent; for example, at Uber or Sesame Credit) and are sometimes mandatory (regardless of a personal choice). And in both China and the West, credit systems function as a reputation system that often goes beyond the law.

Scoring systems are well known in Western societies.⁵³ In the *private* sector, companies in the sharing economy, such as Airbnb, eBay, and Uber, allow providers and users to rate one another based on characteristics such as courtesy. Likewise, quantified technologies track personal habits related to health, sports, and sleep, and categorize (and often score) people based on the data.⁵⁴ Ranking is everywhere. Westerners rate individuals—as passengers, clients, students—and products. Examples are all around: agencies that rate job applicants and provide employment credit checks; insurance companies that offer exclusive deals for people who are willing to give access to personal data, such as fitness trackers and tracking devices to record driving patterns; landlords who decide on tenants based on

⁴⁸ "Notice on Effectively Strengthening Credit Management and Service in Response to the Impact of the Pneumonia Outbreak Caused by the Novel Coronavirus," art. 7, Jiangsu Development & Reform Commission, February 18, 2020, available at <http://xyb.nantong.gov.cn/xynt/upload/ffd9b1f9-c504-4cc1-ae67-01cda4b2915f.doc>.

⁴⁹ "Fourteenth Announcement of Harbin's Work Headquarter of Countering the Pneumonia Situation Caused by the Novel Coronavirus," Harbin, February 15, 2020, available at https://www.creditchina.gov.cn/home/zhngcefagui/202002/t20200217_184961.html; "Decision of the Standing Committee of the Shanghai Municipal People's Congress on the Prevention and Control of Pneumonia Situation Caused by Novel Coronavirus," Shanghai, February 7, 2020, available at https://www.creditchina.gov.cn/home/zhngcefagui/202002/t20200214_184840.html;

⁵⁰ Sensen Ji, *Credit Economy: The Capital Blue Ocean Next Decade* (Publishing House of Electronics Industry, 1st ed., 2018) (信用经济：下一个10年红利风口).

⁵¹ Knight, *supra* note 21.

⁵² Questions of informatics are not analyzed: issues of data identification (what is raw data? How to distinguish between data as facts or as judgments?), data collection (what are the methods and by which institutions?), data choice (which data is used for the normative assessment?), and data verification, interpretation, use, protection, and distribution. For these issues see, e.g., Fan Liang et al., "Constructing a Data-Driven Society: China's Social Credit System as a State Surveillance Infrastructure," 10(4) *Policy & Internet* 415 (2018).

⁵³ Daithi Mac Sithigh and Mathias Siems, "The Chinese Social Credit System: A Model for Other Countries?" 82(6) *Modern Law Review* 1034 (2019).

⁵⁴ Brett Frischmann and Evan Selinger, *Re-Engineering Humanity* (Cambridge: Cambridge University Press, 2018), 165.

“tenant blacklists” in the rental market⁵⁵; and firms that base decisions on data bought from “data brokers.”⁵⁶ Such ratings may have severe consequences⁵⁷—a denial of a job application, loan, and health insurance, or inability to return a product in case of being on a “store-returns blacklist.”⁵⁸ The most known examples of rating systems are credit scores in the United States (e.g., FICO score) and other states (e.g., Schufa in Germany), which assess the creditworthiness of a person mostly based on financial criteria, and whose score is frequently used by banks, insurance and credit card companies. Methods for rating people based on their physical and digital activities are massively expanding in the West.⁵⁹ In fact, one can find the proliferation of rating systems not only in consumer behavior but also in other fields of life. PeepLe, AdviceRobo, FriendlyScore, and TrustingSocial are a few examples of a growing Western “scored society.”⁶⁰

Scoring systems are used not only in the private sector but also in the *public* sector. In Israel, for instance, citizens who serve in the military get a personal score (a quality index, *kaba*), which reflects their value as a soldier. This numerical figure (41-56) influences the placement in military positions, which may affect the future prosperity of the individual. Reported criteria include education, motivation, and the result of a psychometric test and an interview. At Ben Gurion Airport, every passenger is assigned a score according to his/her security risk, and there are “blacklists” for people whose security risk is high.⁶¹ Scoring systems are implemented by public authorities in almost every Western country, rating the valuableness, reliability, and credibility of citizens. A paradigmatic example is school tests. These tests are likely to affect one’s chances to get into a good university and find a proper job; the tests, in most cases, are comparative, rated against the outcome of other students. Scoring systems also apply to noncitizens; think, for instance, of a points-based immigration system. Recently, a method of digital social credit was proposed by Andrew Yang, who was a U.S. Democratic presidential candidate (2020). Digital Social Credits, in his view, could improve civic engagement and volunteer rates; scores could be gained by “participating in a town fair,” “tutoring a local student,” or “volunteering at a local shelter.”⁶²

At the municipal level, notions of social credit are on the rise. In the past years, there have been attempts to use technology to motivate good citizenship through the creation of a catalog of “good deeds.” Examples of good deeds include voting, helping the elderly, seeking professional training, taking first-aid courses, organizing cultural events, and undergoing self-employment workshops. According to one idea, citizens can choose and implement good deeds from a municipal catalog, which will then be recorded and scored; based on the score, each citizen will receive a reward from a parallel

⁵⁵ Kim Barker and Jessica Silver-Greenberg, “On Tenant Blacklist, Errors and Renters With Little Recourse,” *New York Times*, August 16, 2016.

⁵⁶ Aaron Rieke et al., *Data Brokers in an Open Society*, Open Society Foundations, London: the United Kingdom, 2016; Stephanie Clifford and Jessica Silver-Greenberg, “Retailers Track Employee Thefts in Vast Databases,” *New York Times*, April 2, 2013.

⁵⁷ Rebecca Rose, “The Shame of My Very Low Uber Rating,” *Financial Times*, July 4, 2018; “Big Data and Online Scoring: Fintech and Beyond,” *Fintech Ranking*, March 17, 2016.

⁵⁸ James Dennin, “Are You on a Store>Returns Blacklist? How to See the Data Retailers are Quietly Using to Monitor You,” *MIC*, March 28, 2018.

⁵⁹ Danielle Keats Citron and Frank Pasquale, “The Scored Society: Due Process for Automated Predictions,” 89(1) *Washington Law Review* 1 (2014); Mikella Hurley and Julius Adebayo, “Credit Scoring in The Era of Big Data,” 18(1) *Yale Journal of Law & Technology* 148 (2017); John Harris, “The Tyranny of Algorithms is Part of Our Lives: Soon They Could Rate Everything We Do,” *The Guardian*, March 5, 2018; “A Brief History—And Future—of Credit Scores,” *The Economist*, July 6, 2019.

⁶⁰ Citron and Pasquale, *supra* note 56; Josh Lauer, *Creditworthy: A History of Consumer Surveillance and Financial Identity in America* (NY: Columbia University Press, 2017).

⁶¹ Badi Hasisi, Yoram Margalioth, and Liav Orgad, “Ethnic Profiling in Airport Screening: Lessons from Israel, 1968-2010,” 14(2) *American Law & Economics Review* 517 (2012).

⁶² Kevin Roose, “His 2020 Campaign Message: The Robots Are Coming,” *New York Times*, February 10, 2018.

catalog of “municipal benefits.”⁶³ Rewards include free public transportation and bicycle rental, tickets to cultural events, and reduced municipal housing. The idea is to use financial incentives to motivate civic engagement, social solidarity, volunteer work, and social interaction with the hope that, over time, these incentives will create a culture of communal activism. Different versions of this system exist in Barcelona in Spain (Social Coin), Cascais in Portugal (Innowave CityPoints) and Hull in the United Kingdom (HullCoin).

In spite of the rise of social credit systems in the West, the case of China differs significantly for at least four reasons.⁶⁴ First, *scope*: credit systems in the West do not usually score people *qua* citizens, but *qua* drivers, landlords, clients, or soldiers, while social credit systems in China target persons *qua* citizens. By targeting people as citizens, social credit systems do not target them according to a particular, limited profession, but according to being members of a political community. As such, everyone is included in the system and is assessed not only on the basis of being “good” at a job or “nice” toward customers, but also as a good (or a bad) citizen. If a person has a low credit score in the West, she may not be able to get a loan, but this will not affect her entire life—whether she can travel on high-speed trains or apply for a civil service job. In other words, the Chinese system is not limited to one field but is potentially all-encompassing. The implications of doing good or bad radiate beyond the original context into other spheres of life by a set of socio-economic rewards (or punishments) and reputational gains (or losses); citizens can thereby be “punished” multiple times for the same action. The system is comprehensive for another reason. In Western democracies, the rule of law entails that everything that is not forbidden is generally allowed; this creates a division, which is not always clear, between law and morality. In China, social credit systems target not only legally impermissible actions but also morally and professionally undesirable actions. The Chinese system may thus function even when the law ends (hence, it is not fully subject to constraints that are typically characterized legal systems). It is not merely a law enforcement system but a system to generate and enforce *trust*.⁶⁵ It targets desirable actions, even if they are not legally mandatory, and undesirable actions, even if they are not unlawful *per se*. However, it should be noted that the Chinese legal tradition has dominant schools of thought—in particular, Confucianism—that have promoted the extension of the sphere of the law into the domain of morality for centuries.⁶⁶ Therefore, it can be expected that efforts to extend the reach of the social credit system into moral issues in China will correspond to a legal codification of the related behaviors. In this regard, the design of the Social Credit System is interconnected with the Chinese perception of citizenship, in which the dividing line between law and morality, public and private is blurred and quite different than Western societies.

Second, *authority*: the Chinese system is not only comprehensive but also a government-sponsored enterprise. It matters whether private parties, such as large companies, or public parties, such as state governments, leverage the technology. Public authorities, as sovereign actors, have a more extensive range of means at their disposal to reward or punish citizens, like the use of physical force or the power to require companies to refuse services. China is developing a centralized ecosystem of databases whose sources are both public and private; the outcome produced by the data is implemented by both the public and the private sectors. Data sharing between government institutions, and between them and private companies—such as Alibaba, Tencent, and Baidu—will produce a centralized database where many aspects of the public and private life are recorded: commercial data (e.g., mobile phone purchases), social data (e.g., social media contacts), and digital data (e.g., internet search history). Think, as an

⁶³ “Catalog of Good Deeds: Building Civil Society Through Daily Acts of Kindness,” Mayors Challenge, Tlalnepanitla de Baz, Mexico: 2016 Finalist, *available at* <https://mayorschallenge.bloomberg.org/ideas/tlalnepanitla-de-baz/>.

⁶⁴ Mac Sithigh and Siems, *supra* note 50 (offering eight criteria to distinguish China from the West: drafter, user, aim, scoring, application, algorithm, enforcement, accountability).

⁶⁵ The system is called “social credit” yet the word *xìnyòng* (诚信), which is translated to “credit,” also means trust, integrity, and virtue; it is more accurate to call it a “social trust system.”

⁶⁶ Yongxi Chen, “A Déjà Vu? The Social Credit System and Fajia (Legalism),” *Verfassungsblog*, January 28, 2019.

analogy, of an ongoing lawful data-sharing mechanism in the West between the U.S. Government, Facebook, Google, Amazon, YouTube, Uber, eBay, and private bodies such as banks, mobile phone providers, and credit card companies. Such a mega database will allow China to extend the system's logic from "good citizenship" to "good personhood," aiming to create not only the "perfect citizen" but also the "perfect person."⁶⁷

Third, *regulation*: the Social Credit System blurs the distinction between law, economics, and morality. While the system is not extralegal (in fact, its functioning depends on legal codification), it presents a new regulatory approach, which combines all four types of regulation, as perceived by Larry Lessig: laws (enforced by sanctions), norms (enforced by social pressure), markets (enforced by price mechanisms), and architecture (enforced by technical codes).⁶⁸ The Social Credit System, as Primavera de Filippi notes, "essentially consists of code (responsible for collecting data and translating it into a social score) combined with market dynamics (i.e., a series of economic incentives or disincentives to act in a particular manner) and social norms (as a result of ... social pressure)".⁶⁹ This makes the system, regardless of its scope and consequences, fundamentally different than Western legal systems.

Fourth, *regime type*: having a high or a low score, or being on a blacklist, can have far-reaching implications in China. Due to the scope of the system, and the fact that it is government-sponsored, the affected human rights are not peripheral but fundamental—education, health, and housing, as well as freedom of movement, free speech, and individual liberty. Of course, the implications of being blacklisted in the West can also be severe—think of a person who is classified as a high-risk at the airport or has a low FICO score—and may infringe upon fundamental human rights in a way that goes beyond the original context in which the score is given. Nevertheless, in Western societies, people can vote in a free election on the future of the system and there are different notions of rule of law, due process, and separation of power. The point is not against social credit systems per se, but against their design, application, outcome, and their operation in a non-democratic regime, which has different conceptions of justice, fairness, and due process. In other words, it is a matter of degree, not principle. A social credit system just mirrors all the good and the bad things of the socio-economic structure that implements it.

China's social credit system has been influenced by Western notions of financial credit. Sesame Credit was designed in light of the FICO score in the United States,⁷⁰ which assesses a person's creditworthiness; the FICO score ranges from 300 to 850 and it is mostly based on financial criteria: payment history (35% of the score) and length (15%), credit owed (30%), new credit (10%), and credit mix (10%). Mac Sithigh and Siem rightly note that "it cannot be assumed that 'what happens in China, stays in China' ... the growing global influence of China can mean that the Social Credit System may well be a regulatory tool which could inspire the West."⁷¹ Authoritarian regimes, such as Venezuela, are already considering the implementation of a similar system, and supports of different versions of it exist in Western countries such as Germany.⁷² Some liberal scholars even find the system to be valuable. Mac

⁶⁷ Aristotle distinguishes between an *ethical* understanding of virtue (*ethos*, pertaining to personal character) and a *political* understanding of virtue, arguing that being a "good citizen" does not automatically mean being a "good person." One can follow civic duties, such as voting, and fulfil civic expectations, such as engaging in civil society, without being a virtuous person (e.g., not being courageous or temperate).

⁶⁸ Lawrence Lessig, *Code and Other Laws of Cyberspace* (Basic Books, 1999), 85-99.

⁶⁹ Primavera de Filippi, "The Social Credit System as a New Regulatory Approach: From 'Code-Based' to 'Market-Based' Regulation," in *A Dystopian Future? The Rise of Social Credit Systems*, Liav Orgad and Wessel Reijers (eds.), European University Institute, RSCAS 2019/94, (2019), at 25-28.

⁷⁰ Raphael and Xi, *supra* note 10; Martin Chorzempa, Paul Triolo, and Samm Sacks, "China's Social Credit System: A Mark of Progress or a Threat to Privacy?" Peterson Institute for International Economics, 2018, at 4.

⁷¹ Mac Sithigh and Siems, *supra* note 50, at 1035, 1059.

⁷² Angus Bersick, "How ZTE Helps Venezuela Create China-style Social Control," *Reuters*, November 14, 2018; ERGO, "ERGO Risiko-Report 2019: Über die Risikokompetenz und Eigenverantwortung der Deutschen," *ERGO* (2019).

Sithigh and Siems mention that the “system enables honest but poor persons ... to obtain financial credit which otherwise would not be available,” and add that “even the blacklisting system can be seen as beneficial for individuals as far as it induces their debtors ... to comply with court judgments”; by treating citizens by their individual actions, “the Social Credit System may give Chinese citizens more control over the impact of their actions than previously.”⁷³ Social credit systems can also reward human actions and characteristics that are not valued in a market mechanism, such as taking care of children and parents.⁷⁴ The challenge with which political theorists are likely to struggle in the next decades is thus how to design a form of social credit that respects Western conceptions of liberty and democracy.

The following section takes up this challenge and analyzes social credit systems from dominant perspectives of Western political philosophy. By taking this approach, we do not seek to present a normative analysis of the *Chinese* context. We acknowledge that different political philosophies are relevant in China, such as Confucianism and legalism, which might offer very different ways of evaluating a social credit system. Rather, we take the social credit system as a “mirror image” of tendencies in sociotechnical systems that are being developed in the West. Hence, the discourse is one concerning the desirability of social credit systems in the context of *Western* democracies.

III. Civic Virtue

At the core of China’s Social Credit System lies the notion that citizens ought to have certain qualities to sustain social order and harmony. This notion resonates with a widely accepted idea amongst Western political theorists that citizens should possess a core set of qualities for the political community to function relatively well. If citizens are politically disengaged and reluctant to follow social norms and rules, a political community would be dysfunctional even if it has well-designed institutions.⁷⁵ States employ a vast array of policies to enhance essential civic qualities—from military service, via the public-school system and jury duty, and up to coercive laws. These policies are the basis for Western *citizen making*, a process whereby the qualities that supposedly make up good citizens are promoted or demanded.⁷⁶

In order to know how to be a “good citizen,” one needs to ascertain what “good citizenship” implies. In Western theories, the idea of good citizenship is mostly connected with the concept of civic virtue: the qualities or dispositions that citizens need to possess. Most theories try to answer two key questions: (1) *what* is civic virtue, and (2) *how* should it be cultivated? An elaborate response to these questions derives from different theories of citizenship—liberalism (e.g., Kant, Rawls), communitarianism (e.g., Rousseau, MacIntyre), and republicanism (e.g., Aristotle, Arendt). The distinction between these theories is not always clear-cut, because they often overlap in their answer to “what” civic virtue is while differing on the question “how” it can and should be cultivated, and vice versa. Whatever the theoretical framework is, China’s Social Credit System seems to challenge the established understanding of Western philosophy of “what” civic virtue is and “how” it can be cultivated.

By and large, Western theories offer two distinct answers to the question of *what civic virtue is*.⁷⁷ The first considers civic virtue as *intrinsic* quality of citizens, contributing directly to a citizen’s

⁷³ Mac Sithigh and Siems, *supra* note 50, at 1055, 1066.

⁷⁴ Mirjam Müller, “Is a Social Credit System Good for Women?” in *A Dystopian Future? The Rise of Social Credit Systems*, *supra* note 66, at 29-31.

⁷⁵ Philip Pettit, “Republicanism: A Theory of Freedom and Government,” 63(1) *Philosophy and Phenomenological Research* 229 (1997).

⁷⁶ Liav Orgad, “The Citizen-Makers: Ethical Dilemmas in Immigrant Integration,” 25(6) *European Law Journal* 524 (2019).

⁷⁷ David J. Kahane, “Cultivating Liberal Virtues,” 29(4) *Canadian Journal of Philosophy* 699 (1996).

happiness.⁷⁸ It presupposes that human beings act morally good when they aim to attain the highest good of happiness.⁷⁹ Virtue is a disposition that is intrinsically valuable for the person possessing it, like courage or friendship. This means that one cannot simply observe or measure virtuous acts, or take certain actions (say, donation) as a proxy for the existence of civic virtue (say, being generous). Civic virtue is not a mere emotion (e.g., love for one's country), a normative attitude (e.g., wanting to shake hands to greet someone), a certain behavior (e.g., paying taxes or voting in elections), or a piece of knowledge (e.g., citing the national anthem). Instead, one must get acquainted with the general state of a citizen's character over time, which typically happens through close social interaction. The second considers civic virtue as *instrumental*,⁸⁰ being valuable not primarily for the happiness of the citizen possessing it, but rather for the well-being (social order, community cohesion, and so forth) of the political community.⁸¹ For instance, being courageous can be seen as a civic virtue since it fosters a well-functioning public discourse, which has the aim of distributing goods according to the idea of distributive justice. Courage is not primarily seen as valuable in itself but derives its value from its instrumental relation to communicative action.⁸² Thus, civic virtue is perceived as any quality possessed by a citizen that contributes to the well-being of the political community, which includes a broad range of attitudes, social norms, and types of knowledge and behavior.⁸³ Aspects of civic virtue can therefore be observed and measured, for instance, by testing a citizen's knowledge of social norms (e.g., a citizen test) or observing a citizen's actions (e.g., voting).

Western political theories similarly offer two distinct methods for *how civic virtue should be cultivated*.⁸⁴ First, there are *technical* methods. These methods presuppose that citizens can acquire civic virtue as a skill, through habitual exercise (rehearsing the behavior to perfect the skill); "good citizenship" can be learned, similar to learning how to drive a car or play a musical instrument. Citizens are supposed to engage in the process of virtue cultivation by the promise of increased utility—for example, economic advantage and social reputation or status. Acquiring virtue is similar to learning a technical skill based on pre-given and known "standards of excellence."⁸⁵ This means that commemorating "rightly" entails following social standards of excellence, such as respecting a collective period of silence. Civic virtue can be assessed by a clear understanding of success and error and can be taught through the use of coercive law, education, and public etiquette. Making good citizens requires the establishment of certain means—such as a school system or military service—to instruct citizens to internalize habitual skills that support the overall flourishing of a political community. Second, there are *phronetic* methods (taken from the Aristotelian concept of phronesis, prudence). Phronetic methods are based on the premise that civic virtue cannot be learned by instruction or fixed

⁷⁸ Alasdair MacIntyre, *After Virtue: A Study in Moral Theory* (3 ed., Notre Dame: University of Notre Dame Press, 2007), 191.

⁷⁹ Aristotle, *Nicomachean Ethics*. (T. Irwin, ed., 1999). Indianapolis: Hackett Publishing Company: 1.2, 1094a18-23.

⁸⁰ Michael A. Fitts, "Vices of Virtue: A Political Party Perspective on Civic Virtue Reforms of the Legislative Process," 136(6) *University of Pennsylvania Law Review* 1576, 1634 (1988). Although there is great diversity amongst liberal scholars, the view of civic virtue in instrumental terms exists in the writings of central liberal thinkers such as Hobbes and, to a lesser extent, Rawls. See, e.g., Michael A. Fitts, "Vices of Virtue: A Political Party Perspective on Civic Virtue Reforms of the Legislative Process," 136(6) *University of Pennsylvania Law Review* 1576, 1634 (1988).

⁸¹ William A. Galston, *Liberal Purposes: Goods, Virtues, and Diversity in the Liberal State* (Cambridge: Cambridge University Press, 1991), 218-219.

⁸² Robert Audi, "A Liberal Theory of Civic Virtue," 15(1) *Social Philosophy and Policy* 149, 170 (1998).

⁸³ Emily McTernan, "How to Make Citizens Behave: Social Psychology, Liberal Virtues, and Social Norms," 22(1) *Journal of Political Philosophy* 84, 101 (2014); Richard Dagger, *Civic Virtues: Rights, Citizenship, and Republican Liberalism* (Oxford: Oxford University Press, 1997), 196.

⁸⁴ Tom Angier, *Techné in Aristotle's Ethics* (New York: Continuum International Publishing Group, 2010).

⁸⁵ MacIntyre, *supra* note 75, at 190. For instance, a player excelling in football is judged by specific socially established standards that are a common basis for the game. *Ibid.*, at 217.

standards, but only through engaging in virtuous acts.⁸⁶ Virtue is cultivated through frequent engagement in particular virtuous acts, taken in a specific moment, which have no precedent and, hence, no prior standard that can guide its exercise. It is oriented towards an open future, and depends on the ability of the citizen to make a singular decision in a particular context in which no previously known standards can let the citizen know how to act virtuously.⁸⁷ People become virtuous through social interaction, facilitated by a public “space of appearance” where they freely act and speak together.⁸⁸ Furthermore, citizens should be intrinsically motivated to engage in civic virtue and not be primarily swayed by extrinsic incentives like reputation or money. According to Aristotle, there are three “ultimate goods” (i.e., motivators) for human action: pleasure, honor, and *eudaimonia*.⁸⁹ The goods of pleasure and honor are not self-contained; pleasure depends on external stimulus (e.g., consuming food) and honor on the external approval of others (e.g., gaining a reputation in making a work of art). Only actions aimed at *eudaimonia*, the highest good, are self-contained and therefore intrinsically motivated. A citizen should be honest because honesty is intrinsically valuable, not because it brings reputation or comfort.⁹⁰

How does the notion of civic virtue underlying the Social Credit System relate to Western conceptions of civic virtue? First, concerning the concept of civic virtue, the Social Credit System incorporates an *instrumental* conceptualization of civic virtue. It considers civic virtue as an indispensable tool of the state to achieve social order in China—citizens are required to be virtuous in order to serve the aggregate social good and public trust—and is not considered as a means to the end of individual happiness. Moreover, the input of the system—the “items” it collects—is considered to be observable and measurable indicators. Whether one pays bills, crosses the street while the traffic light is red, or fails to pay a visit his/her parents are seen as visible indicators of civic virtue. These indicators can be about practically anything, captured by the motto that “trust-breaking” can happen anywhere and lead to consequences everywhere. It means that civic virtue is conceived in broad terms, including the behavior of citizens, the relations they maintain, and the status they have. It takes these elements as measurable proxies for citizens’ qualities and presupposes that they can be measured and observed. To some extent, the way in which Social Credit System understands civic virtue can be likened to the way in which one understands the quality of a tool like a computer. Its value is derived from the function it has with regard to the human user or the organization in which it operates; a computer is not valuable in and of itself. Moreover, its qualities (speed, safety, processing capacity, etc.) can be observed and measured by testing a broad range of states and behaviors. “Knowing” about the civic virtue of a citizen is like knowing the performance of a computer; one has to understand the relation between certain actions and aims, as well as to manage to observe and measure those.

Second, concerning the method for cultivating civic virtue, the Social Credit System incorporates a *technical* mode of cultivating virtue, which equates virtue with a skill that can be taught by instruction and is the outcome of a learning process in accordance with some pre-defined standards. Citizens are incentivized to behave “correctly” through mechanisms of increased reputation and material rewards or punishments. The simplest form of incentive is the national system of blacklists and redlists by which punishments or awards are assigned. More sophisticated methods exist in local pilots and commercial

⁸⁶ Aristotle. *Nicomachean Ethics*, 6.5, 1140b23-26; Robert C. Roberts, “Virtues and Rules,” 51(2) *Philosophy and Phenomenological Research* 325 (1991).

⁸⁷ Hannah Arendt, *The Human Condition* (Chicago: University of Chicago Press, 1958), 178.

⁸⁸ Arendt, *supra* note 84, at 49. A computer scientist can be skillful in programming software code, which means that s/he fully masters the programming activity. Yet, a virtuous person is not virtuous by mastering every situation within certain disciplinary boundaries but, instead, by making the “right” decision in a particular moment and in a contingent context.

⁸⁹ Aristotle. *Nicomachean Ethics*, 1.6, 1096b15-20.

⁹⁰ Emad Atiq, “Why Motives Matter: Reframing the Crowding Out Effect of Legal Incentives,” 123(4) *Yale Law Journal*, 1070–1116 (2014). Atiq rejects incentives in choice-architectures based on extrinsic motivation.

initiatives. Sesame Credit uses surveillance and machine learning strategies⁹¹ to provide citizens with a personalized score based on data evaluation; the score can affect a citizen's reputation, providing an extrinsic motivation to engage in the cultivation of civic virtue and behave in a certain way. Moreover, citizens have to relate to standards of ethical behavior by instruction. The Social Credit System includes catalogs of civic virtue, containing the types of behavior that are assessed. By and large, these catalogs enable citizens to know with which type of actions they must engage to increase their rating; they largely know the standards on how to perform actions well and change their rating, as well as the rules of being affected by feedback of the system (similar to a teacher praising or reprimanding a student for answering correctly or in error). The way citizens cultivate their civic virtue in the Social Credit System can be likened to the way a craftsman cultivates his skill. For instance, in building a house, a builder relates to different activities, such as placing the stones and fixing the roof to finalize the house, all have to conform to some architectural standards. The difference, however, is that in acting according to the method offered by the Social Credit System, a citizen has no final product but engages in a never-ending project.

To sum up, China's Social Credit System incorporates a predominantly *instrumental concept* of civic virtue and a *technical method* of cultivating it. Such a combination is rarely endorsed by any Western liberal, communitarian, and republican political theory. Western political theories either share to some extent the instrumental understanding of civic virtue yet generally object to the technical way it should be cultivated (such as some liberal theories), or commit to the technical method of cultivation yet object to the instrumental understanding of civic virtue (such as certain communitarian theories).⁹² Some republican theories, most notably the one developed by Arendt, oppose both accounts (i.e., the instrumental conception of virtue and technical method for its cultivation) and commit instead to civic virtue as having intrinsic value and being cultivated through a phronetic method.⁹³ The only strand of Western political theory that comes close to China's conception of civic virtue would be "libertarian paternalism"⁹⁴ and "tolerant paternalism."⁹⁵ These theories are related to "nudging" policies—the idea that policy makers should build choice-architectures that use indirect incentives to cultivate behaviors and, consequently, qualities of citizens.⁹⁶ While nudging theories differ from the logic of the Social Credit System, because they rely on indirect, rather than direct incentives, they nonetheless share the instrumental conception of civic virtue and its technical cultivation with the Chinese system.

The Social Credit System provides the most telling case of a new understanding of citizenship. It coincides with the advances of humankind in the realm of sociotechnical system building. Innovations in technology, such as machine learning and facial recognition, coupled with innovations in policymaking, result in new possibilities to reconceptualize citizenship. The following section reflects on one of these possibilities—termed as "cybernetic citizenship"—and addresses three normative challenges they confront us with.

⁹¹ Eva Xiao, "Tencent's New Credit System to Use Payments, Social Data," *Tech in Asia*, January 31, 2018 (comparing Tencent's Credit System to Google PageRank).

⁹² Communitarian scholars, such as those inspired by MacIntyre, might value that the Social Credit System focuses on practices deemed significant in the Chinese society. However, communitarians are likely to oppose the idea that virtuous actions can be conveyed through a system of sticks and carrots. In a communitarian view, this ought to be conveyed through narratives that explain certain practices. In the Social Credit System, however, citizens are aware that they do not comply with the desired standards, but not *why* they should comply.

⁹³ Arendt, *supra* note 84, at 162.

⁹⁴ Bijan Fateh-Moghadam and Thomas Gutmann, "Governing [through] Autonomy. The Moral and Legal Limits of 'Soft Paternalism,'" 17(3) *Ethical Theory and Moral Practice* 383 (2014).

⁹⁵ Luciano Floridi, "Tolerant Paternalism: Pro-ethical Design as a Resolution of the Dilemma of Toleration," 22(6) *Science and Engineering Ethics* 1669 (2015); Richard H. Thaler and Cass R. Sunstein, *Nudge: Improving Decisions About Health, Wealth, and Happiness* (New Haven: Yale University Press, 2008).

⁹⁶ Cass Sunstein, "The Ethics of Nudging," 32(2) *Yale Journal on Regulation* (2015): 413-450.

IV. Cybernetic Citizenship

The understanding of civic virtue in China's Social Credit System points at a new conception of citizen making, which differs from Western citizen making in a central aspect—it uses “cybernetic” principles in its design and implementation, giving rise to cybernetic citizenship. In general, the field of cybernetics is concerned with understanding systems of control and communication—how humans and machines communicate with one another. It is premised on the idea that goal-directed entities such as animals, humans, and machines cannot only be understood in mechanical terms but should also be comprehended in teleological terms, that is, explaining behavior in terms of “purpose.” These entities are conceptualized as “systems” in the sense that they are assemblages of parts (e.g., databases, surveillance cameras) in greater wholes, and have relatively stable boundaries.⁹⁷ Cybernetic systems have an internal, corrective feedback mechanism, which makes use of sensory inputs to change a behavioral output; governing is perceived as a purposive action, a goal-directed behavior.⁹⁸ These systems are defined according to a) sensed input, b) processed throughput, and c) effective output. It is no coincidence that the modern study of cybernetics emerged at the dawn of information and communication technologies, because they presented these characteristics.⁹⁹

Cybernetics is not only focused on understanding systems of governance but also on designing them according to cybernetic principles. Since the Industrial Revolution, cybernetic principles have guided the design of the governance of factories and bureaucratic organizations. However, the greater the scale, openness, and complexity of a system, the harder it is to apply cybernetic principles successfully. With advances in policymaking and technology, this difficulty has progressively lessened, and cybernetic systems have been applied to broader contexts (for instance, that of a “sensing city”¹⁰⁰), extending the scope of cybernetic governance to that of the entire political community. True, community governance has had cybernetic “points of intervention” in civic life before; for example, the school, the prison (think of Foucault's panopticon),¹⁰¹ and the factory.¹⁰² Yet, while these relatively closed environments show some cybernetic features—they have defined and stable input sensing mechanisms (school tests, factory surveillance), throughput mechanisms (test scores, hour registrations, production targets), and output mechanisms (punishments, being fired)—they are limited in nature and scope.

Early applications of modern information and communication technology (ICT), such as the use of broadcasting (TV, radio), did not contain cybernetic characteristics. They could “sense” the world to collect inputs, process these inputs to change their internal states, and generate outputs that seem goal-directed, but they lacked the corrective feedback mechanism. The spread of recording technologies and the invention of the Internet have given rise to a network society,¹⁰³ where the cybernetic use of technology for citizenship governance has become possible. Three technological developments have motivated the rise of cybernetic citizenship governance.¹⁰⁴ First, innovations in sensing technologies, such as security cameras and facial recognition software, have augmented the capacity to observe the behaviors of citizens in the public sphere. Second, advances in big data and information processes have

⁹⁷ Ronald R. Kline, *The Cybernetics Moment* (Baltimore: Johns Hopkins University Press, 2015), 1.

⁹⁸ See, generally, Norbert Wiener, *The Human Use of Human Beings* (London: Free Association Books, 1989). The concept of cybernetics is derived from the Ancient Greek word *cybernētēs*, which means a pilot, steersman, or governor.

⁹⁹ Andrew Pickering, *The Cybernetic Brain: Sketches of Another Future* (Chicago: University of Chicago Press 2010); Eden Medina, *Cybernetic Revolutionaries: Technology and Politics in Allende's Chile* (Cambridge: MIT Press, 2010), 20-21.

¹⁰⁰ Jennifer Gabrys, “Programming Environments: Environmentality and Citizen Sensing in the Smart City,” 32(1) *Environment and Planning D: Society and Space* 30 (2014).

¹⁰¹ Michel Foucault, *Discipline & Punish: The Birth of the Prison* (New York: Vintage Books, 1977).

¹⁰² A remarkable historical example of the application of cybernetic principles to the design of governance was the Chilean Project *Cybersyn* (1971-1973).

¹⁰³ Manuel Castells, *The Rise of the Network Society* (Chichester: Wiley-Blackwell, 2010).

¹⁰⁴ Tiqqun, *The Cybernetic Hypothesis* (Robert Hurley trans., Semiotext(e), 2001), 7.

enabled real-time data sharing and processing, where data inputs can be translated into a score. Third, the ubiquity of ICTs and their increasing proximity to everyday life have enabled fine-grained modes of punishment and rewards, for instance, through blocking one's capacity to access a ticket payment system.

Social credit systems present a radically new, relatively transparent¹⁰⁵ extension of cybernetic governance to the entire political community, which had not been technologically possible until recently, particularly on a mass scale. The Social Credit System *is designed* in line with cybernetic principles. In its ideal form, it constantly records information about citizens in real-time according to measurable proxies (input), processes the data as feedback loops to generate a personalized citizen's status or score in accordance with a pre-defined catalog (throughput), and control behavior by issuing real-time rewards and punishments based on the status or score (output). Moreover, the system is not a mere technical structure of enforcement of pre-made human decisions (e.g., a court ruling) but is, in certain cases, capable of "deciding" itself. It may act autonomously by using pre-conceived parameters, rather than human decisions, based upon data inputs. Not all the information is automatically recorded; yet, to the extent that the system is conceived in cybernetic terms, it creates what Samantha Hoffman terms "automated social management."¹⁰⁶

The Social Credit System does not currently offer a full-fledged instantiation of cybernetic citizenship, yet it moves towards such reality; this development poses significant normative challenges that must guide Western policymakers in their existing attempts to design similar systems. Overall, three normative concerns arise as a consequence of the rise of cybernetic governance of citizenship. A *first* concern is about the notion of *civic virtue* promoted by cybernetic citizenship. Ever since Aristotle, scholars have discussed two different views of civic virtue: as civic effectiveness and as moral excellence.¹⁰⁷ As *effectiveness*, civic virtue is explicitly linked with the aspect of the civic life of "being ruled" according to a pre-determined range of knowable and desirable behaviors, such as paying taxes on time, donating money to charity, and volunteering in a community. In this sense, even citizens living in a country governed by a dictator can be virtuous by acting according to the expectations of the ruler. Civic virtue as effectiveness has little to do with ethical virtue, which indicates whether one is a good person, and hence has no intrinsic value; it is instrumental. As *excellence*, civic virtue is about freely participating in ruling (or governance). In modern democracies this translates into engaging in civil society, protesting, and taking up public offices or public initiatives. Hannah Arendt takes this political understanding of virtue to be the essence of ethical virtue, in arguing that a virtuous action "has always been assigned to the public realm where one could excel" and, thus, "could distinguish oneself from all others."¹⁰⁸ In other words, it might be important for citizens to be effective in fulfilling tasks such as paying taxes, but civic virtue only arises when citizens excel in participating in governance.

The cybernetic character of the Social Credit System promotes the exercise of civic virtue as effectiveness. It does so by considering civic virtue to be an observable and measurable quality of a citizen that can be assessed by pre-defined standards that fixate notions of correctness and error. In this context, the idea of moral excellence becomes progressively intertwined with the ability of citizens to follow pre-defined measurable standards that are laid out by the system. As such, to act virtuously means to imitate model rules of correctness and error that are derived from past behavior—existing social

¹⁰⁵ The Social Credit System is labeled *transparent* because of the way it functions. Citizens ought to know that they are assessed (and their score), what type of behavior they are rated upon, and how they can improve their rate. This contrasts it with nudging methods, which try to obfuscate their working from the eyes of the citizens. See, e.g., Adam Oliver, "Nudging, Shoving, and Budging: Behavioural Economic-Informed Policy," 93(3) *Public Administration* 700 (2015).

¹⁰⁶ Samantha Hoffman, "Managing the State: Social Credit, Surveillance and the CCP's Plan for China," 17(11) *China Brief* (2017).

¹⁰⁷ Robert Develin, "The Good Man and the Good Citizen in Aristotle's 'Politics'," 18(1) *Phronesis* 71 (1973).

¹⁰⁸ For Arendt, this activity does not coincide with ruling as it is usually understood (that is, as controlling people), but rather with participating in "acting in concert." Arendt, *supra* note 84, at 47.

norms, etiquettes, and customs—rather than to distinguish oneself in starting something anew. Although this tendency is to be expected in the Chinese context, in which excellence in Arendt’s terms may be seen dangerous (e.g., initiating new political projects), it is likely to exist in any social credit system due to the system’s reliance on an understanding of a catalog of behaviors that are evaluated according to pre-existing standards. The problem with such a system is that it tends towards *conformity*; it does not challenge citizens to act virtuously but rather to conform to a pre-defined regime of behavior. In undemocratic regimes such as China, citizens are further unable to participate in initiating the standards that govern them or challenge the system’s rules.¹⁰⁹

A *second* concern relates to the *cybernetic* character of the Social Credit System—it cultivates civic virtue at the expense of individual freedom. This problem has been discussed widely by liberal theorists, who see danger in equating virtue with technical skill, claiming that the “habit of freedom,” which is deemed essential for citizens in liberal societies, cannot be acquired merely through a (skillful) process¹¹⁰ or a set of fixed “social rules.”¹¹¹ If one has to follow certain pre-defined rules to become a good citizen, one is not entirely free in making autonomous judgments. Liberals have always faced a challenge—how to demand certain virtues while, at the same time, retain the principles of individual autonomy and free will?¹¹² Arendt raises a similar point from a republican perspective, arguing that free action in which a citizen exercises virtue is future-oriented and open-ended; it must be unexpected, not “a process of repetition based on existing rules or standards.”¹¹³ This implies that citizens should not act based on extrinsic incentives, such a reputational gain or monetary reward, but engage in virtuous acts out of their own (free) will.

This concern is not merely the existence of pre-defined rules in a Social Credit System—to some extent, all legal systems have such features—but is also related to the algorithms govern the rules, a problem known as “algocracy”¹¹⁴ that replace human choices with automated decision-making. In the context of the Social Credit System, the rise of algocracy entails the system’s capacity to impose decisions on citizens arbitrarily. While this may be relatively harmless in certain domains of life—for instance, when buying clothes—it can become problematic in other domains of life, such as ethical judgements. Social credit systems advance a reality where citizens no longer need to exercise ethical judgement; instead, they need to follow pre-defined rules stipulated for them by automated decision-making. In this system, citizens are encouraged not to think themselves about what is right or wrong but to delegate their autonomous judgement to a system. De Filippi rightly notes that social credit systems can even legitimize a wrong behavior and encourage individuals *not* to act virtuously as long as “they have a sufficiently high credit score that they can afford acting in a harmful manner.” China’s Social Credit System, she argues, introduces “a new type of transactionality in the realm of social and political activities, whereby an individual may feel legitimised to act wrongly, provided that s/he has performed a sufficient number of good deeds in the past, so as to discount for the lower score.” Such a system changes the meaning and essence of good citizenship since the motto is no longer “I have a good credit score, because I am a good citizen,” but rather becomes “I’m a good citizen, because I have a good credit score.”¹¹⁵

¹⁰⁹ Jens van ‘t Klooster, “Rewarding Virtuous Citizens” in *A Dystopian Future? The Rise of Social Credit Systems*, *supra* note 66, at 4-6.

¹¹⁰ Darrin Hicks, “The New Citizen,” 93(3) *Quarterly Journal of Speech* 358, 358 (2007).

¹¹¹ Eamonn Callan, *Creating Citizens* (Oxford: Clarendon Press, 1997), 222.

¹¹² Because of this tension, McTernan insists that social norms are “multiply realizable,” which seems to include a notion of voluntariness. McTernan, *supra* note 80, at 102.

¹¹³ Arendt, *supra* note 84, at 162.

¹¹⁴ John Danaher. *Freedom in an Age of Algocracy*. In S. Vallor (Ed.), *Oxford Handbook on the Philosophy of Technology* (Oxford: Oxford University Press, 2020), 1-32.

¹¹⁵ De Filippi, *supra* note 66, at. 27-28. In such a system, Good citizenship based on intrinsic motivation is “crowded out” by extrinsic motivations. *See, e.g.*, Kate Underhill, “When Extrinsic Incentives Displace Intrinsic Motivation: Designing Legal

A *third* concern is related to the extension of cybernetics to the realm of *citizenship*. One of the greatest achievements of the Enlightenment has been the Kantian idea that human beings should be treated as an end in themselves, and not merely as an instrumental means to something else; humans have an intrinsic value that does not depend on external values, such as whether the person contributes to the public good.¹¹⁶ The implementation of this idea has always been limited in reality. The Industrial Revolution, for instance, massively turned humans into means of production needed to increase the return on capital investment. Yet, new technologies potentially extend the factory unit to the entire citizenry, where every citizen is a “worker” in the “factory” of citizenry, which en masse serves the public good. In this respect, China’s Social Credit System is morally problematic because citizens are treated merely as a means needed to realize public interests and their consent to the system is at least doubtful; the system objectifies (or commodifies) people.

In a way, a comprehensive cybernetic governance of societies has always been the dream of creators and rulers. Religions, to take one example, have ruled human beings by instilling the notion that God knows everything, even the soul, and collects data about believers, who are eventually ranked and judged by their actions. In Judaism, during the annual Day of Atonement (also known as Yom Kippur), actions and thoughts are recorded, assessed, and sealed by God. It is about rating on a massive scale—a good ranking will lead God to inscribe a person in the Book of Life, and a bad ranking may lead to punishments.¹¹⁷ Similar attempts to control believers by divine systems—where God records behavior (input), assesses the information according to conformity with religious orders (throughput), and rates people based on that (output)—exists in other religions. The institution of confession in Christianity (or *vidui* in Jewish tradition) can be seen as old-fashioned systems of data collection, surveillance, and control. And the notion that human beings are watched by God and sealed to heaven or hell can be perceived as a form of rating (or religious credit) based on a “carrot-and-stick” system. Generations of children were educated in light of such traditions. Take the words of the Christmas song, *Santa Claus is Coming to Town*: they warn children of a surveillance Santa—“You better watch out ... Santa Claus is coming to town, He’s making a list, He’s checking it twice, He’s going to find out, Who’s naughty and nice ... He knows when you’ve been bad or good, So be good for goodness sake.”¹¹⁸ What is new in modern applications of the surveillance state, as manifested in the Chinese Social Credit System, is that, perhaps for the first time in history, emerging technologies allow the creation of a mass-scale cybernetic citizenship in a systematic way in which citizens are means-to-an-end according to a logic of a sociotechnical system.¹¹⁹

The Social Credit System is China’s attempt to extend social engineering to citizenship governance and create a form of cybernetic citizenship. The field of citizenship has been largely oblivious of the rise of cybernetic trends such as the Social Credit System. The above-mentioned concerns should be a warning against any attempt to embrace similar systems in the liberal state.

Carrots and Sticks to Confront the Challenge of Motivational Crowding-Out”, 33(1) *Yale Journal on Regulation* 213–279 (2016).

¹¹⁶ Nancy Davis, “Using Persons and Common Sense”, 94(3) *Ethics* 387 (1984); Samuel J. Kerstein, “Treating Oneself Merely as a Means”, in Monika Betzler (ed.), *Kant’s Ethics of Virtue* (Berlin: de Gruyter, 2008), 201–218; Jacob Weinrib, “Kant on Citizenship and Universal Independence,” 33 *Australian Journal of Legal Philosophy* 1 (2008).

¹¹⁷ According to Jewish tradition, the registry in the Book of Life occurs on Rosh Hashanah, ten days before Yom Kippur. In these ten days, believers can change their rating by seeking forgiveness for wrongs and doing goods, thereby moving from “blacklists” to “redlists.”

¹¹⁸ See, e.g., Adrienne LaFrance, “Santa Claus and the Surveillance State,” *The Atlantic*, December 17, 2014; Laura Pinto and Selena Nemorin, “Who’s the Boss? “The Elf on the Shelf” and the Normalization of Surveillance,” *Canadian Centre for Policy Alternatives*, December 1, 2014.

¹¹⁹ It is perhaps an interesting anecdote that the Chinese government is dominated by people whose education background is natural and formal sciences, such as engineers. In such context, governance may be seen as a “technical craft” of social engineering to optimize objectives. See, e.g., “James Palmer, China’s Overrated Technocrats,” *Foreign Policy*, July 4, 2019; Patricia Eldridge, “The Chinese Government Is Dominated by Scientists and Engineers,” *GineersNow*, December 7, 2018, available at <https://gineersnow.com/leadership/chinese-government-dominated-scientists-engineers>.

Conclusion

One of the most interesting aspects of social credit systems is related to citizenship. The question of what is “good citizenship” has been at the core of Western political theory ever since the creation of political communities. Is the “right” thing to do in society dictated by law or morality? Who should decide, by which criteria, and under which procedures? Is it a philosophical question, to be decided by a set of moral standards, or a sociological and anthropological question, to be decided by a survey of public opinions or the way people live in society on a daily basis? Traditional mechanisms to cultivate good citizenship include public education, public media, and the legal system. Social credit systems deviate from (or add to) these mechanisms by creating a new system of citizenship governance that the world has never seen before. It invites us to think of other, new forms of citizenship governance.

The Chinese experience of the Social Credit System could trigger future developments in citizenship governance. While the Industrial Revolution brought a cybernetic notion into factories, the Digital Revolution is expanding the scope of cybernetic systems far beyond labor-force participation to the entire human life. Cybernetic citizenship trends in China presents a different understanding of the relationship between citizens and governments compared to conceptions in Western political theories. Cybernetic citizenship fails to produce “republican citizens,” who use sensor data to engage in political debates and master technologies to express themselves, but instead give rise to “cybernetic citizens,” who are “mere nodes of sociotechnical networks under corporate or government control.”¹²⁰ At the beginning of the Digital Revolution, the expectations were that citizens would bend technology for civic empowerment and liberation. And yet, some of the ideals Western citizenship is grounded upon—e.g., autonomy, liberty, and justice—are not necessarily the ideals on which the Digital Revolution is premised. It may be that emerging technologies will not duplicate Western values, making their achievements better and faster, but fundamentally changing them.¹²¹ In cybernetic citizenship, surveillance and control are not a means of governance but are the basis for governance.¹²² This, if happens, can lead to a fundamental transformation in the concept of citizenship and the political role of the state.

¹²⁰ Dorien Zandbergen and Justus Uitermark, “In search of the Smart Citizen: Republican and Cybernetic Citizenship in the Smart City,” *Urban Studies* 1-16, 1 (2019).

¹²¹ Lessig predicted long ago how the architecture of the Net could become a tool for social control. See Lessig, *supra* note 65.

¹²² Larry Catá Backer, “Next Generation Law: Data Driven Governance and Accountability Based Regulatory Systems in the West, and Social Credit Regimes in China,” 2018, *SSRN*, The Pennsylvania State University, 2018.

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