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Multiple social credit systems in China

Chuncheng Liu

Background

In 2014, the State Council of the People's Republic of China (State Council) issued a blueprint, the "Planning Outline for the Construction of a Social Credit System (2014–2020)" (Planning Outline), aiming to build a national social credit system (SCS) in six years. The Planning Outline claimed that many of society's current social problems, from food safety accidents to academic dishonesty, result from the lack of trust and strict regulation of those people who break social trust (*xinyong*). To solve these problems, an SCS is needed that systematically collects data about every person's and every institution's creditworthiness and trustworthiness and can serve as a basis for a strong reward and punishment system.

Since the Planning Outline came out in 2014, various projects have been generated in the name of SCS. For example, governmental agencies regularly publicize information of people on the "discredited judgment debtor list" (*shixin bei zhixingren mingdan*) on governmental websites and limit their access to things such as flight tickets. Some cities published their own municipal score system, which evaluates residents' trustworthiness, including data such as "attitudes toward parents," and gives people with a high score rewards like public transportation discounts. Many mobile applications launched their score systems and extend these scores' use into everyday life, such as on the dating market and for foreign visa applications.

Scholars and media in both China and the West commonly see these diverse practices as different aspects of one unified system. While the Chinese media respond predominantly with praise without critical inquiry (Ohlberg, Ahmed, and Lang 2017), Western media and scholars often depict the Chinese SCS as a centralized surveillance tool of governmental control

that collects people's biodata, online speech, and social networking. They view it as a crucial part of the Chinese technoscience dystopia that connects commercial systems with governmental datasets and makes automatic detection and punishment possible (Botsman 2017; Falkvinge 2015; Liang et al. 2018; Mosher 2019; Qiang 2019).

However, a closer look at the Chinese SCS would debunk these visions as misconceived and exaggerated. The Planning Outline did not propose "a" unified and ubiquitous SCS that covers everything, but rather various SCSs in different social localities. In practice, as many scholars' recent works have shown, different SCS experiments have been conducted and have resulted in a very messy and complicated reality (Ahmed 2019; Gan 2019; Kobie 2019). In this paper, I will show that there has never been a single and unified SCS in China. Instead, there are multiple co-existing SCSs at different levels and in different fields that often do not mutually aggregate. Meanwhile, the Chinese SCSs are still constantly developing and evolving, making changes in designs and implementations at different locations. The question we urgently need to answer is not "What is the Chinese SCS?" but "What *are* Chinese SCSs, and how do *they* work?"

The main body of current literature on Chinese SCS is conducted by legal scholars and based on the central government's published policy documents. They show a wide range of data collection, aggregation, and analytics plans with poor privacy protection in policy designs (Y.-J. Chen, Lin, and Liu 2018; Y. Chen and Cheung 2017; Liang et al. 2018). Some scholars also examine media and public opinions toward SCSs, both quantitatively and qualitatively,

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showing general support without any fundamental challenges (Kostka 2018; Lee 2019; Ohlberg, Ahmed, and Lang 2017). The multiplicity of Chinese SCSs has been more acknowledged in recent publications. Particularly, Ohlberg, Ahmed, and Lang (2017) identify two kinds of pilot program for SCSs (commercial and local governmental), which provide a useful distinction for this paper to further develop. Creemers (2018) offers a historical review of the development of multiple Chinese SCSs in different fields. Using data from Beijing's SCS websites, Engelmann et al. (2019) show

what kinds of behaviors the local government tries to promote and discipline.

Yet, when scholars discuss the multiplicity of SCSs, they often simply use examples from different places without systematically examining the whole landscape. They also lack a clear demonstration of the different logics and theories behind different SCSs, as well as relationships among them. Thus, they overlook the conflicting contested process of different institutions, from different governmental agencies to commercial entities, in the development of the multiple SCSs. To better understand current SCSs' social impact and future potentialities, we need to gain more systematic and accurate knowledge about what SCSs are doing. Based on the data I have collected from governmental policies (both central and municipal) and newspaper articles, I adopt a more realistic approach and goal in this paper. I aim to explore and articulate the multiplicity of current Chinese SCSs, examine diverse logics and operationalization strategies behind them, and then explore the relationships among them.

Currently, there are four main kinds of SCS emerging from two approaches. The first approach sees SCS as an infrastructure for economic and financial activities, which is led by the People's Bank of China (PBOC), China's central bank. PBOC designs and implements a nationwide governmental financial credit system. There are also commercial credit score and rating systems developed by private corporations, such as the Sesame score, which are under the supervision of PBOC. The second approach sees SCS as a potentially useful tool for social governance, which is led by the National Development and Reform Commission (NDRC), a macroeconomic management governmental agency under the State Council. SCSs created under this approach include nationwide governmental blacklists/redlists developed by different central governmental agencies and municipal governmental SCSs that are piloted at the local level.

I then historicize current SCSs and show that many elements and assumptions of SCSs after 2014 can be traced back to China's political history. Finally, I propose an alternative theoretical framework to understand Chinese SCSs as symbolic systems with performative power that is more than a simple repressive and direct political project.

Nationwide governmental financial credit system

The nationwide governmental financial credit system that PBOC has developed focuses on dealing with the risks and uncertainties that information asymmetry

brings in the economic and financial fields (Rona-Tas and Guseva 2018). When "social credit" was first mentioned in a Chinese national policy document in 2002, it was this more narrowly understood financial credit system that the Chinese government discussed. PBOC's credit system covered both natural persons and corporations. The first-generation financial credit system was launched in the early 2000s and produced credit reports that for individuals contained merely financial and economic information such as the number of credit cards, mortgage history, and delayed payment.

After the State Council published the Planning Outline in 2014, PBOC started to develop the second-generation financial credit system, which is to be launched in the middle of 2019. The second-generation credit system offers credit scores, like the FICO system in the United States. Both generations of this system collected most of their data from banks and other financial institutions and were only used in the financial field by lenders.

Commercial credit rating and score systems

Commercial credit rating for businesses had existed in China long before the emergence of credit rating and score systems for natural persons and the "social" credit system. Since the 1990s, credit rating companies, such as China Chengxin, Dongfang Jincheng and Dagong, were established to grant credit ratings for businesses in the market. Like their international counterparts, such as Moody's and Standard & Poor's, these credit rating companies merely focus on the market behavior of corporations and their ability to pay back debts.

China launched its individual credit score market on January 5, 2015, granting trial licenses to eight commercial companies, mostly tech companies, to build their own individual credit rating and score system. Sesame credit score (*zhima xinyongfen*), built by Ant Financial (*mayi jinfu*), a company affiliated with Chinese tech giant Alibaba, was launched on January 28, 2015, and has been the most commonly used commercial credit system to date. Alibaba has more than 800 million users for its two platforms: Taobao, the biggest online commerce platform in China; and Alipay, the biggest mobile payment platform in China.

The Sesame credit score, like some other commercial SCSs, differs in many ways from the PBOC's financial credit system and other governmental SCSs that I will elaborate on in the following section. First, it includes personal data, such as educational level and ownership of cars, in the credit score calculation. Us-

ers can upload their certificates and legal documents for Ant Financial to verify their information. Second, it includes one's social network relational data on Alibaba's platforms. Yet, contrary to popular claims that a Sesame score will be affected by a person's political views on social media (Falkvinge 2015), Ant Financial claimed that they do not have access to any content of an individual's social media posts (Hu 2017). Third, it includes detailed consumption information, which is incorporated into its model. A famous example is that diaper consumption would lead to a higher score while video game consumption would result in a lower score, as the former indicates more social responsibility. Lastly, its model is more complicated than PBOC's financial credit system and other publicized governmental credit systems, claiming to use machine learning to model more than ten thousand different dimensions of data (Li 2015), while governmental SCSs are still relatively primitive and based on points accumulation.

The Sesame credit score soon became extremely influential and widely used, with the company's large user base and extensive promotion. A high Sesame credit score would allow people such conveniences as deposit-free public bikes, hotels, or renting services. Meanwhile, it also became commonly used "off-label" (Rona-Tas 2017) in other social contexts, such as on online dating platforms and for travel visa applications, which were intentionally promoted by Ant Financial to increase the Sesame credit score's impact. However, such uses, alongside other issues, resulted in criticism from the PBOC, Sesame's supervisor.

After the trial period of the commercial individual credit system ended in 2017, none of the eight companies had their license renewed. PBOC's officials criticized these companies for lack of data sharing across different platforms, conflicts of interests, and lack of understanding of what should be considered as "credit" (Wu and Sun 2018). In early 2018, the National Internet Finance Association of China, a governmental agency under the PBOC, and these eight companies became funders and shareholders of one commercial individual credit score and rating company, Baihang Credit. It became the only commercial company to receive an official license for conducting business in individual credit score and rating in China. According to Cunzhi Wan, director of the PBOC credit bureau, once Baihang started to launch its services, all the current commercial individual credit rating services should be suspended. Although Baihang has not provided any products or services since its establishment, Ant Financial and other companies have already withdrawn their credit score's implementation in the financial market and shifted priorities away from scoring (Y. Zhang 2018).

Nationwide governmental blacklist/redlist systems

The nationwide "social" credit system that most people discussed after 2014, however, is a system that combines "discredited subject blacklist" and "credited redlist" (*shouxin hongmindan*). A new cyberinfrastructure, Credit China (<https://www.creditchina.gov.cn/>) was launched in 2015 to publicize information of people and institutions that are on different blacklists and redlists and to promote policies and news about SCSs and social trust. Its municipal versions, such as Credit Beijing and Credit Shanghai, have also been constructed. Currently, almost every city in China has its own SCS website.

Although the centralized cyberinfrastructure seems to indicate a unified blacklist/redlist system, again, there is no such single system. Various blacklists/redlists exist based on different central governmental agency jurisdictions, while NDRC oversees and/or coordinates their design and implementation. Each blacklist has different inclusion criteria. For example, the Office of the Central Cyberspace Affairs Commission (CCAC) proposed to include those people who spread rumors online into its "Internet service discredited subject blacklist." While the Civil Aviation Administration (CAA) put people who are disorderly on flights on its blacklist. The consequence of getting on different blacklists varies, even after 44 central governmental agencies signed an agreement in 2016 to share data and punish jointly people on different blacklists. Publicizing personal information, such as name, address, along with the reasons why the person is on the blacklist, on SCS websites might be the only unified punishment across different blacklists. Taking CCAC and CAA as an example, punishment for people on the CCAC blacklist is merely a limitation of their internet use, while punishment for people on the CAA blacklist could be limitation of their air travel.

Among the different blacklist systems, the first and most mature is the discredited judgment debtor list, which was launched on July 16, 2013 by the Supreme People's Court (SPC) to deal with the problem of the enforcement of court judgments. People on this blacklist are included predominantly in connection with nonpayment of debts in economic disputes after a court ruling. The typical case is a person (or business) who owes others money but refuses to repay, even though they have the economic capacity, after the court has ruled that they should. Courts, from local to the supreme, are the main institutions in determining who should be put on this list.

The maturity of the discredited judgment debtor list is apparent in many respects. First, it is the most

widely used blacklist system so far. In January 2019, for example, 215,582 people were on national discredited lists. Among them, 578 were on the railway corporation blacklist, 862 were on CAAs, and one was on the Tax Bureau's, while all the rest were on the discredited judgment debtor list. A study of public records on the Beijing SCS website also supports this point (Engelmann et al. 2019). Second, it has the most successful implementation of joint sanctions. In the beginning, the SPC already cooperated with different governmental agencies to impose joint sanctions to limit purchases by people on this list, including things like first-class train and flight tickets, real estate, and vacation-related expenses. Blacklist status would also influence a person's children, as they cannot attend private schools. In subsequent years, SPC and NDRC have built more connections and strengthened their power of joint sanction. Besides consumption constraints, rights related to working in the government or promotion in public institutions are now all limited in the new plan. In addition, people on the discredited judgment debtor list would even be called differently, as *laolai*, which means "very dishonest person who refused to pay his/her debts." No specific name is given to people on other discredited blacklists.

Discredited blacklists and credited redlists targeted both natural persons and institutions such as non-governmental organizations, business corporations, and governments. Institutions' legal representatives and key personnel in charge of the legal and financial obligations would also be affected. Taking the discredited judgment debtor list as an example, if an organization refused to meet a court ruling (usually nonpayment of financial obligations), the organization, plus its legal representatives and key personnel in charge of the legal obligation, might be classified as discredited judgment debtors. The most striking examples of the implementation of this system are in its application to governments. In April 2017, media found that more than 480 city, county, and country governments were classified as discredited parties (H. Zhang 2017). Governmental leaders of these places experienced punishments such as limitations on plane and train travel, while their governments' borrowing and investment activities were also significantly limited.

Municipal governmental systems

The central governmental agencies designed the national discredited blacklist and credited redlist system, constructed the cyberinfrastructure to publicize information, and built the multi-agency joint sanction cooperation to punish discredited people. Yet it is mostly local governmental agencies that implement

these policies: collecting and uploading data, classifying and punishing people. Enforcement has not always been very active. For example, one city had 11,000 discredited judgment debtors in the system, but only enforced punishment 50 times (Rao 2018). Some other cities are more active and innovative in the enforcement of the national SCS. For example, the court in Luoyuan, a small city in Fujian province, publicizes discredited judgment debtors' personal information (name, photo, address, and money owed) at the beginning of movies played at local cinemas. The court in Qichun, a mid-sized city by Chinese standards in Hubei province, even works with local mobile companies to give discredited persons unique ringtones so that people know from the tone if the caller is a *laolai*.

The multiplicity of SCSs is not only about the various ways to implement punishment for people in the discredited judgment debtor list. Many local governments also construct their own municipal SCSs and reconfigure the meaning of "trustworthiness" and "credit" in their local practice. Unlike the severe fragmentation among different agencies in the central government, local governmental authority can better coordinate (or force) different departments to work together at the local level. This difference is reflected in the organizational arrangements. While there is still no cross-ministry SCS agency at the central governmental level, municipal governments commonly establish a new municipal governmental agency, often named "XX SCS center/office," to design and implement municipal SCSs. Although some cities' municipal SCS for businesses is divided according to the different social fields under different governmental jurisdiction, the municipal SCS for natural persons is always united into one system on the local level. Some municipal SCSs, such as Ningbo's, produce credit reports, while the most innovating and arresting municipal SCSs are based on quantified scores.

Suining, a county-level city in Jiangsu, was the first city to construct a quantified SCS for natural persons. In 2010, Suining released a system called "mass credit" (*dazhong xinyong*), which granted each resident a credit score. Misconduct such as jaywalking would result in a score deduction. Suining's mass credit system soon faced a huge backlash from the domestic media, which argued that the government should not score their citizens in general and worried that such practices were abuses of the government's power. Some even denounced Suining's SCS as a system for rigid social control akin to the "Good Citizenship Certificate" (*liangminzheng*) issued by Japanese colonizers during China's occupation (Creemers 2018; Ju 2010). The county government claimed to have revised the system due to the controversy, yet it has not responded to any other inquiries since then.

Table 1. Chinese cities with municipal quantified SCS (by May 1, 2019; N = 21)

City	Province	Population ^a (million)	GDP ^b (billion RMB)	Launch date	Number of indicators
Rongcheng	Shandong	0.7	121.1	1/1/2014	391
Shanghai	Shanghai	24.2	3267.9	4/30/2014	N/A
Suzhou	Jiangsu	10.7	1859.7	1/23/2016	243
Yiwu	Zhejiang	1.3	124.8	8/10/2017	175
Wuhu	Anhui	3.7	327.9	11/1/2017	N/A
Weifang	Shandong	9.4	680.5	1/9/2018	N/A
Suqian	Jiangsu	2.9	277.1	3/23/2018	80
Suifenhe	Heilongjiang	0.1	1.1	3/26/2018	236
Fuzhou	Fujian	7.7	785.6	6/4/2018	68
Xiamen	Fujian	4.0	479.1	7/5/2018	750
Ankang	Shanxi	2.7	113.4	8/20/2018	210
Wulian	Shandong	5.1	25.8	9/1/2018	305
Weihai	Shandong	2.8	394.9	11/2/2018	1503
Hangzhou	Zhejiang	9.5	1350.0	11/16/2018	N/A
Fuzhou	Jiangxi	4.0	138.2	11/16/2018	N/A
Jiangyin	Jiangsu	1.7	380.6	11/19/2018	112
Ruzhou	Henan	0.9	43.4	11/29/2018	220
Taicang	Jiangsu	0.7	124.1	12/4/2018	54
Puyang	Henan	4.0	165.4	12/28/2018	83
Shenyang	Liaoning	8.3	635.0	1/15/2019	N/A
Ordos	Inner Mongolia	2.1	376.3	3/15/2019	49

Note: Data collected from the National, provincial, and municipal Statistics Bureau;

^a Data date: 2017; ^b Data date: 2018, 1 RMB = 0.14 USD = 0.13 EURO

Rongcheng, a seaport county-level city in Shandong, became the first city to launch its own quantified SCS since the Planning Outline was issued in 2014, and with far less media exposure and controversy than Suining. More cities followed this kind of quantified SCS model. By May 1, 2019, 21 Chinese cities had published their own municipal quantified SCS, and 27 more cities were in the process of preparing quantified SCSs. We can observe a significant increase in the speed with which new municipal SCS turned to quantification: 16 out of 21 have been launched since 2018 (Table 1). The different municipal SCSs have commonalities as well as differences. Some municipal systems are more alike than others. For example, SCSs of Ruzhou, Ankang, and Suifenhe have largely adopted Rongcheng's 2016 SCS framework and indicators (Rongcheng updated its metric in both 2016 and 2019) with little local variation.

Cities with quantified SCSs are located predominantly in the east coast provinces (Figure 1). Most of them have a population of more than one million (17/21, 81%) and occupy critical economic or political roles. For example, Shanghai is the biggest city in China, while Suzhou, Xiamen, and Hangzhou are cities with the largest GDP in their provinces. Fuzhou, Hangzhou, and Shenyang are capitals of their provinces. Among the 21 cities, the majority (15/21) publicized their metrics and indicators. Fuzhou, the capital of Fujian province, only publicized its positive indicators that reward credit score, keeping secret its negative indicators that deduct from a person's credit score. The number of indicators in publicized municipal

quantitative SCS metrics ranges from 49 (Ordos) to 1503 (Weihai). Most quantified municipal SCSs also construct classification based on a person's score. For example, in Rongcheng, people with scores ≥ 960 , 850–959, 600–849, and ≤ 599 will be classified as A, B, C, and D, respectively.

Achieving good classifications or high scores in the municipal SCS will result in various benefits supported by governmental agencies and commercial organizations. The most common reward is public transportation discounts, increased borrowing limits in public libraries, and fast track for governmental services. Some cities, like Hangzhou and Weihai, also give loan discounts for people with a high municipal SCS score. Punishments for low municipal SCS

scores are smaller in scope and items. Most cities do not even elaborate specific punishments, and in those cities that do, punishments are mostly about honor and suspending promotions for people who work in public institutions. Suifenhe city government also indicates that it suspends or decreases social welfare payments for people with a very bad credit score.

Data sources of municipal SCSs are varied. Most of these municipal SCSs are largely based on the aggregation of pre-existing legal rules and regulations from different governmental agencies. Yet different municipal SCSs may include rules from different governmental agencies. For example, Yiwu's 2018 metric explicitly includes 41 governmental agencies and public institutions, while the SCS in Suqian only had ten governmental agencies and public institutions. Courts, the office of procurators, police departments, transportation departments, tax bureaus, and state-owned utility companies are included in all publicized municipal SCSs. Yet participation by health and education departments, for example, is absent in some municipal SCSs. In addition, some cities incorporate data beyond pre-existing governmental rules and regulations. The most salient example is Rongcheng, which extends to cover social and moral behavior such as "conducting activities of superstition" (deduct 10 points out of 1000) in its SCS metric.

The kinds of data collected in the municipal SCS vary. Still, most municipal SCSs focus merely on individual behavior and do not include socioeconomic or biological characteristics. Shanghai and Puyang, for example, explicitly claim that collecting data such



Figure 1. Number of Chinese cities with municipal quantified SCS by mainland China provinces (by May 1, 2019, N=21)

as ethnicity, religious beliefs, party membership, body shape, genetic information, fingerprints, and medical history in the name of SCS is illegal. Yet some cities, such as Taicang, collect individual education, employment, and marriage data. For Rongcheng and those cities that adopt Rongcheng's framework, party membership information, at least Chinese Communist Party (CCP) membership, will be collected, as there is a specific section in their SCS metric that regulates party members' behavior. Social relationships would not influence a person's score. The only exception is in Rongcheng SCS, which punishes the guarantor of another who fails to repay a loan. More social relation considerations were included in the reward section but were limited to family level. For example, in Rongcheng SCS, family members of a military person will be rewarded with 5 points; family members of a body/organ donor will be rewarded with 100 points.

Relationships among multiple SCSs for natural persons

In the sections above I presented the four main kinds of SCSs in two groups. These multiple SCSs are not

necessarily interconnected. In general, the nationwide governmental discredited blacklist, and particularly the discredited judgment debtor list, is more connected than others, mostly through data input to other SCSs (Figure 2).

Most of the nationwide governmental SCSs are controlled separately by different central government agencies and do not connect with each other. The only exception is the relationship between PBOC's financial credit system and the discredited judgment debtor blacklist. Discredited judgment debtor information would appear in the PBOC's credit report, which may influence the debtors' relationship with banks and other financial sectors that use PBOC's credit report as a reference. The relationship among municipal and commercial SCSs and the discredited judgment debtor list operates in the same one-way direction. If someone was classified as discredited in the judgment debtor list, in most municipal SCS rules, that person would immediately be reclassified into the lowest credit level with corresponding credit score deduction. For commercial SCSs, Chinese SPC has sent discredited judgment debtor information to Ant Financial since 2015, so the people on the list would have a significantly lower Sesame score. Yet low municipal or commercial SCS scores or levels would not influence the nationwide discredited blacklist system.

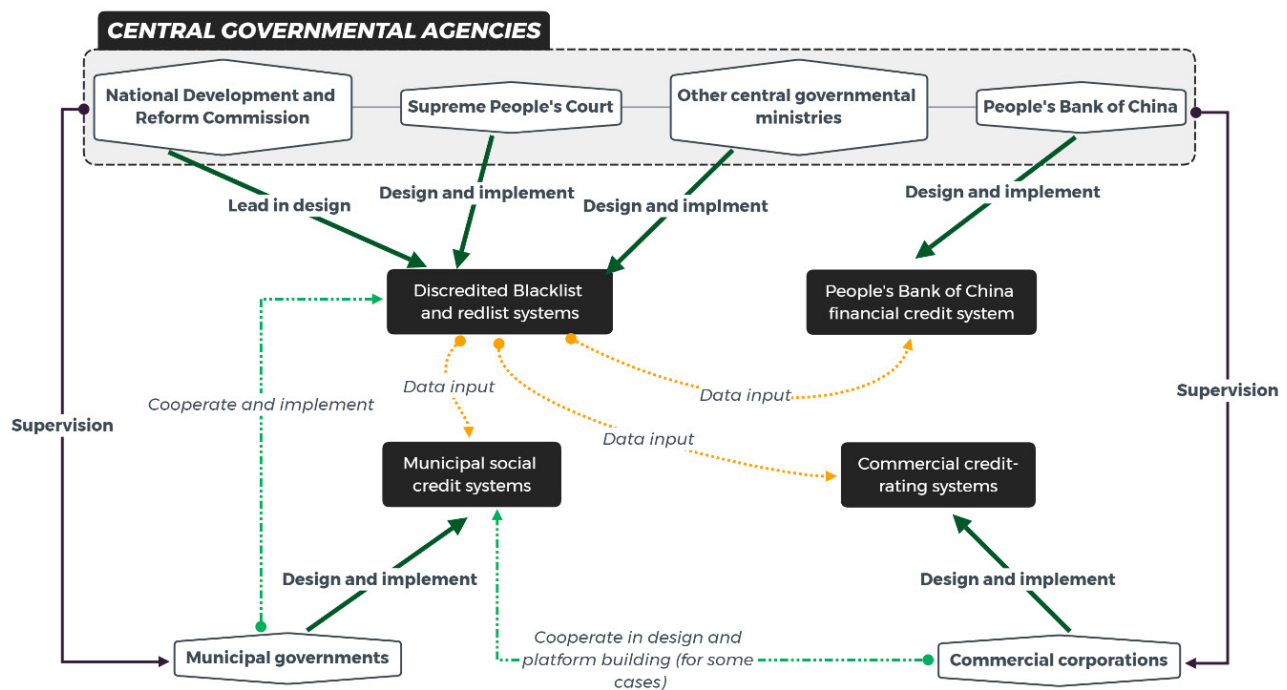


Figure 2. Relationships among social credit systems for natural persons in China

Relationships and commensurability among different governmental municipal SCSs are more complicated, given the diverse situations and metrics different cities have. This issue limits the implementation of municipal SCSs, and actions are now being taken to solve it. For example, Shanghai, Jiangsu, Zhejiang, and Anhui province published a cooperation action plan last year, which mentioned the building of a mutual recognition mechanism for different municipal SCSs (Shanghai Development and Reform Commission 2018), yet we still need more evidence to understand the process. Although some commercial companies, such as Ant Financial and Liulian Technology (Shenyang), helped different governmental agencies to build their own SCS models or cyberinfrastructures, there is no evidence that commercial SCS data is included in any municipal governmental SCS calculation.

Similar incommensurability could be found among commercial SCSs. Before Baihang Credit was established, each commercial SCS only used their own data and public records with models designed by themselves. As a result, different commercial credit scores are difficult to compare with each other. This is one of the critiques that PBOC officials made about commercial SCSs, and one of the important reasons why Baihang Credit was established. PBOC wants to aggregate data from all these companies to produce a single credit score/rating through Baihang. In an interview last year, a PBOC's official indicated that Baihang Credit, like PBOC's own credit system, would focus on the financial field and resist the potential abuse in other social areas (Y. Zhang 2018). The con-

nection with the blacklist/redlist system and municipal SCSs might, therefore, be very limited.

Historicizing social credit systems

As I showed above, although the SCS Planning Outline was published in 2014, many policies, platforms, and practices that were later considered critical parts of SCS were, in fact, proposed or enacted earlier. Looking further back in history could offer us some insights into SCSs. Scholars have connected current SCSs to the personal file system (*renshi dang'an*), a traditional governmental documenting practice that collects citizens' important information (such as education and employment history, award, crime and misconduct records, and evaluations from different institutions) into a file that is then stored in a government archive (Y.-J. Chen, Lin, and Liu 2018; Liang et al. 2018). While the connection between SCSs and *dang'an* highlights the data collection and surveillance aspects of SCS, this historicization does not capture another, and perhaps more important, of SCSs' functions: symbolically classifying people into different categories and granting different social labels and life opportunities.

Bourdieu (2014) argues that the state has "the monopoly of the legitimate use of physical and symbolic violence over a definite territory and over the totality of the corresponding population." One of the most important functions of the state, then, is to produce and canonize social classification. With this perspective, current SCSs are closer to the other two Chi-

nese systems: class of origin status (*jieji chengfen*) and household registration (*hukou*).

From 1950 to 2004, every Chinese citizen was assigned a “class of origin” label from a classification system that conceptualizes the individual’s class status, which included 45 labels such as “worker,” “landlord,” or “counter-revolutionist.” As a classification system, the class of origin system was directly connected to the political ideology of Marxism-Leninism that prescribed who should and should not be trusted. It was based purely on history and family relations: one’s class status was determined by the economic status and political activities of one’s family’s male household head before 1949 when the PRC was established (Treiman and Walder 2019). The state monopolized the power to classify people under different class status. People under different categories had significantly different life chances. For example, people who had “worker” or “poor peasant” class origins were able to access more social resources, while people who had “landlord” or “counter-revolutionist” class origins were highly stigmatized and did not even have the right to receive higher education during the Cultural Revolution (1966–1976).

Another significant classification system was the household registration (*hukou*) system, which was initiated in 1958. Every *hukou* had two pieces of information: 1) location of registered residence; and 2) “rural *hukou*” or “non-rural *hukou*” classification status. The initial information is based on place of birth. A person’s *hukou* information was hard to change after its assignment, although it was not prohibited (Chan 2019). Different *hukous* were associated with different social resources and welfare, such as medical insurance (Liu et al. 2018).

Both the class of origin and *hukou* classification had the function to manage populations and redistribute resources, yet they were also symbolic. On the one hand, their existence and implementation relied on the control of the symbolic violence of the PRC state: the government promotes such classifications in policy documents, newspapers, and public speeches with

the strategic use of the historical discourse and narratives. On the other, they had symbolic functions to sustain a specific social order and legitimate the governance of the CCP. On the individual level, being classified into different categories also had a significant symbolic influence on people. For example, being a “rural *hukou*” was not only about one’s place of origin. It also implies a backward, uneducated, and poor symbolic identity showing subordinate social status (Chan 2019). Class of origin classification faded from Chinese daily life after the Cultural Revolution, while the *hukou* system became less important after the early 2010s, and the distinction between rural and non-rural status was abolished in 2016. Their impact on Chinese social life still persists.

Discussion

It has been five years since the State Council issued the Planning Outline, and 2020 is the deadline that the State Council planned to establish the “basic legal and standardization foundation of social credits and credit infrastructure that covers the whole society.” In this paper, I have systematically reviewed the multiplicity of Chinese SCSs and interactions among them. This multiplicity reminds us not to mistake different SCS practices for parts of “the” unified Chinese SCS, but to recognize them as various SCSs that are produced and utilized in a specific social context. From national to municipal, from governmental to commercial, there are diverse SCS regimes with different criteria, scopes, and implementation (Table 2).

It is hard to foresee if a nationwide, unified, and quantified SCS that can cover every aspect of social life will ever be designed and implemented in the future. It is true that China is an authoritarian country that could forcefully mobilize various state apparatuses and the society to construct social projects no other countries easily could. The recent establishment of Baihang Credit and withdrawal of other commercial SCSs did show the government’s power and capacity to unify dif-

Table 2. Multiple Social Credit Systems in China

Category	Leading agencies	Main purpose	Subject	
			Natural person	Institution
Nationwide governmental	People’s Bank of China (PBOC)	Market infrastructure	Personal credit report and score	Corporate credit report
	National Development and Reform Commission (NDRC) and other central governmental agencies	Reinforce social governance	Discredited blacklist and credited redlist systems based on different governmental jurisdictions	
Municipal governmental	Supervised by NDRC, designed by municipal authorities	Reinforce social governance	Quantified score system or credit report system	Quantified score system for different fields
Commercial	Supervised by PBOC, designed by commercial companies	Market infrastructure and profit gaining	Credit score for individual	Credit rating for corporations

Table 3. Timeline for social credit system development in China

Time	Event
1990s	Many commercial credit rating companies for corporates established
2002	"Social credit" was first mentioned in the 16th National Congress of the Communist Party of China
2006	People's Bank of China launched its credit report system for individuals and corporates
2007	"Social credit system" (SCS) was first mentioned in central government document
2010	Suining launched its quantified mass credit system and met with controversies
2013	Supreme People's Court launched the discredited judgment debtor list
2014	Planning Outline for the Construction of a Social Credit System (2014–2020) published
2014	Rongcheng launched its quantified municipal SCS
2015	PBOC issued trial licenses for commercial personal credit rating and scoring business; Sesame score launched
2015	Credit China website launched; municipal credit websites followed
2018	Baihang Credit company established and received formal license for commercial personal credit rating business
2019	PBOC credit report system updated

ferent systems. However, we need to also remember that China's authoritarianism is fragmented, especially after Mao's death and the end of the Cultural Revolution: different governmental agencies have different interests, logics, and traditions that may not easily be aggregated (Lei 2017; Lieberthal and Lampton 1992). Every time the central government proposes some new but vague ideas or instruments, different governmental agencies try to maximize their own interests and power, and conflict with others. After all, all commercial SCSs are under the regulation of one governmental agency, PBOC, while governmental SCSs are influenced by political conflicts between multiple governmental agencies and therefore show discrepancies (Table 3). Different central governmental agencies keep proposing their own blacklists, while different municipal governments keep designing different local SCS metrics. The emerging mutual recognition mechanism for different municipal SCSs is more like evidence to show that the multiplicity of SCSs will last, rather than the trend of a potential unification.

Tensions between the two key governmental agencies in SCSs, PBOC and NDRC, further complicate the situation. They have different understandings of what "credit" is about and what a "credit system" should be. PBOC focuses on a narrow definition of "credit" and differentiates it from "honest" or "trustworthy" (Wu and Sun 2018), which is exactly what NDRC tries to promote through SCS. On the one hand, PBOC's SCS and commercial SCSs under its supervision have a specific aim. Like other financially centered credit systems, scores produced by these SCSs are about the possibility of one's debt payment behaviors in the future (Rona-Tas and Guseva 2018). As a result, indicators act as predictors in these SCSs. They are not necessarily normative or even directly associated with the outcome independently (such as diaper purchase history), as long as they make sense in a statistical way and produce useful results. In other words, these SCSs are "forward-looking."

On the other hand, those SCSs under the NDRC's lead reward good behavior and punish misconduct

and try to discipline people to be trustworthy citizens, yet they do not aim to predict a specific outcome in the future, as no clear definition of "trustworthy citizen" has ever existed. Scores and classifications in these SCSs are summaries of what people did in the past. In other words, SCSs under NDRC are "backward-looking." As a result, each indicator in these SCSs has specific and moralized meaning and must directly associate with the general goal of these systems. Otherwise, people will challenge the legitimacy of specific indicators or even the whole system.

Chinese SCSs should be historicized not as simple extensions of the previous personal archive system, but as an attempt to classify people and regulate their social life. Of course, compared with the symbolic violence of the previous state classification, SCSs are significantly more humanized, flexible, and transfer the responsibility for one's classification status from family to individual. After all, SCSs are based on people's achieved, not ascriptive, qualities. They evaluate people based on their own behavior instead of unalterable family background; SCS metrics are more diverse than single political considerations, and the implementation of SCSs are not associated with severe social exclusion as previous systems were. Yet the fundamental symbolic characteristics in SCSs that are based on classification and quantification require a theoretical framework that is beyond mere toolkits for active surveillance for repressive authoritarian politics.

We need to conceptualize Chinese SCSs not as a dystopian technology that could only exist in authoritarian societies, for its fundamental assumptions, practices, and implications – quantifying, sorting, classifying, and treating people differently based on their scores – are not that far away from the Western democratic societies (Foucault 1995; Fourcade and Healy 2016; Lee 2019; Lyon 2018). Fourcade and Healy (2013) proposed the concept of "classification situations," which captures the reality that prevailing uses of the market classification, particularly credit score, have produced a new social reality in which a person's position in the credit market are consequential for

their life chances. As a result, the social classification may produce self-fulfilling prophecies and moralized inequality (Fourcade and Healy 2013; Rona-Tas 2017).

SCSs are not only tools that classify people into different categories based on seemingly objective metrics for rewards or punishments. These classifications are symbolic and performative: they not only classify what reality is, but also actively engage in changing society and the subjects they have classified (Callon 2007; Foucault 1995). Meanwhile, people under SCSs are not compliant subjects without any agency. Classification, after all, is about constant struggles (Bourdieu 1984), where dynamic social relations could be revealed. As Rona-Tas (2017) shows, the off-label use of credit scores may destabilize the classifications' legitimacy and finally destroy them.

We need more studies to engage in this field from different perspectives, and particularly more empirical research. First, we need more studies on how SCS policies were designed at different levels, in particular locally. How were the inclusion criteria of national blacklists/redlists established? How were different governmental agencies and non-governmental actors involved in translating regulations and moral standards into numbers and producing quantified metrics? What kinds of expertise and positionality were involved in

the process of operationalizing "trustworthiness," "creditworthiness," and "honesty"? How were various interests balanced? In addition, we need more studies on how SCSs were implemented by the governmental agencies and experienced by citizens. How do people understand SCSs and make sense of them? Particularly, what kinds of problems come up in these processes, and how do people solve them? While it is true that we have heard little about Chinese citizens' systematic resistance to SCSs, it does not mean problems do not exist. Do people game the system, or simply not care? The multiplicity that I showed in this paper further complicates these issues: How do different SCSs translate, and/or produce different life experiences?

More importantly, as sociologists, we need to ask what the social consequences of the SCSs are. How performative are SCSs? Do SCSs work as a self-fulfilling prophecy, not reflecting, but (re)producing one's creditworthiness? How may different SCSs (re)produce different social relationships and inequalities? We need to not think of Chinese SCSs as a unique case that is confined within the boundaries of a nation, but to connect its design and practice to increasing implementation of similar surveillance, sorting and classifying systems globally to understand the profound implications of such algorithmic governance.

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