

Origins and Perceptions of the Chinese Social Credit System

Lydia Barrios

Emerson Niou, Faculty Advisor

Honors Thesis submitted in partial fulfillment of the requirements for Graduation with Distinction in Political Science in the Trinity College of Arts & Sciences at Duke University.

Duke University
Durham, North Carolina
2020

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Acknowledgements

I would like to thank Elliot Mamet, the Political Science Department at Duke University, and my advisor Emerson Niou for their support in pursuing this thesis. I would also like to thank Jessica Teets whose presentation at the 2019 Duke-UNC China Leadership Summit on data privacy in China inspired this topic. Finally, thank you to my family and close friends for the moral support they provided throughout my writing process.

Abstract

The Chinese State Council announced in 2014 plans to construct a nationwide Social Credit System (SCS) utilizing big data to surveil Chinese citizens. Local governments and private companies alike have since been contributing data to a national database that will function as part of the national Social Credit System. This thesis provides **a meta-analysis of the existing literature on the Chinese Social Credit System to better understand its origins, implications, and perceptions.** It first discusses a broad history of political surveillance in China, followed by an in-depth analysis of the SCS's framework, while also examining the government's relationship with private companies in constructing this system. Finally, this thesis addresses domestic perceptions of the SCS and the effects it has on behaviors, while also providing three distinct frameworks through which to interpret these findings.

Chapter 1: Introduction

In China, the internet and other types of information technology play a very different role than in other parts of the world. Although elsewhere technology, and the internet in particular, are seen as tools for “freedom, expression, and free association,” the Chinese Communist Party (CCP) uses them as part of a system of political propaganda and social management that the CCP can use to discourage political dissent, preserve social stability, and model its citizens.¹ The Chinese government has recently introduced a new system of mass surveillance that relies on big data to monitor citizens' behavior, known as the Social Credit System (hereafter the national SCS). Because power in China is completely centralized which has enabled for such a system to exist, Western leaders have been comparing the Chinese government's recent approach to data and technology to an Orwellian 'big brother-esque' system or a real-life version of the *Black Mirror* episode "Nosedive."² As the technological sphere of influence shifts its epicenter more towards Asia and China in particular, international audiences have become increasingly concerned with the role technology and data specifically play within the government's political goals, especially in the hands of an authoritarian government like Xi Jinping's.

Under the national SCS, the Chinese government will be scrutinizing citizens and closely monitoring their behaviors to calculate a social score. This score will be used as part of a rewards and punishments scheme that aims to control citizens' behavior to fit the standards set by the CCP. These scores and behaviors, if deemed "bad," will result in limited access to schools, hospitals or doctors, restricted or prohibited travel, higher interest on

¹ Jiang and Fu, “Chinese Social Media and Big Data,” 382.

² Song, “The West May Be Wrong About China's Social Credit System,” 33; Dai, “Enforcing Law and Norms for Good Citizens,” 38.

financial loans, and even sanctions on private companies. These behavioral controls will be applied to both citizens and companies/organizations. Some components of the punishments scheme are already functioning, as in the past year alone five million people were banned from buying tickets for high-speed trains, limiting their modes of travel.³

The government will also be working with private companies, such as Tencent and Alibaba, who already collect extensive data on their users and operate existing commercial social credit systems. These companies have already provided and will continue to supply the government with citizens' personal data and information on their behaviors, such as purchasing history and preferences, which will in turn influence their scores in the national SCS.

A unified national social credit system does not yet exist, although it is fully under construction and will soon be applied nation-wide. However, several commercial and local government-run social credit systems do already exist throughout China. Some local governments have been monitoring citizens' behaviors for over two decades and using their systems to strengthen existing legal frameworks. Commercial social credit systems collect and rate data on their users' behaviors through their products and services.

As data plays an increasingly dominant role in policymaking, business development, economic policy, and scientific innovation, it is more and more frequently perceived as the 'new petroleum' of the twenty-first century. While this thesis will not discuss the ethics behind big data collection in China, there is a prominent conversation amongst Western nations and scholars about how the Chinese government is using big data to obliterate its

³ Backer, "China's Social Credit System: Data-Driven Governance for a 'New Era,'" 213.

citizens' rights.⁴ This thesis leaves aside these normative questions because facial recognition and other methods of surveillance are not unique to China. However, it is very important to recognize the violations of human rights and ethics that such a system of surveillance is imposing on its citizens by global standards. Systems of surveillance and trust have existed in China for centuries and trust remains a central pillar of Chinese culture. From the *baojia* in Imperial China to Criticism and Self-Criticism under the CCP, all also influenced by Chinese philosophy and thought, the Chinese government has always used systems built on trust for legal enforcement. This historical and political context provides the framework for such a system to exist in China with little backlash from its citizens to date.⁵ The Chinese cultural mentality allows for and encourages surveillance of those around them, trusting that the system (whether the government's current approach or one of the many used for centuries) will punish those around them that behave disloyally.

President Xi Jinping adopted an extremely centralized Internet Governance Framework to control public opinion, increase the dissemination of state-approved propaganda, and regulate the access to and spread of information online. However, technological innovation is challenging Xi's censorship model and control over his citizens. In order to preserve strong control over its population, the CCP is creating a nationwide system of surveillance to monitor citizens, businesses, and political organizations, known as the Social Credit System. The system will monitor and rate individuals and collective organizations (including businesses) based on their economic, political, legal, and

⁴ For more information on the disciplinary framework of the system used to exert political power, reference honors thesis written last year Dellinger, "Understanding the Chinese Social Credit System."

⁵ Kostka, "China's Social Credit Systems and Public Opinion."

sociocultural behavior. In a nation where rule of law is not strongly established, a system built on trust aimed to leave little room for error and manipulation is seen as the next best alternative to achieve more ethical law enforcement. Fraud is extremely widespread in China today and technology has fostered such an increase in this in recent years that Chinese citizens see a system that establishes greater trust as necessary.

The national SCS is only one component part of a larger plan where Xi wants to create a 'New Era' for China, one that is further removed from the West and relies more heavily on 'Chinese characteristics.' Experts also believe that if this national SCS is successful in China, the government will attempt to export it throughout its global Belt and Road Initiative (BRI).⁶ Xi announced the BRI in 2013, shortly before announcing his plans to build a national SCS, which are both part of his 'New Era' politics. The national SCS is providing Chinese rule of law with a system that both reinforces and replaces the existing legal framework.

Although still in its pilot stages, the CCP aims to fully deploy the system nationally by 2020. The SCS started as a financial credit scoring system, yet it has expanded to include political, judicial, and social aspects. Financially, the government social credit systems mandate compulsory participation, while commercial ones developed by companies allow for citizens to opt-in. However, the state also has access to the data collected from the systems developed by financial companies through established mutually-beneficial partnerships. Forty-three pilot programs currently exist that are fully-run by local governments.⁷ The pilot programs in cities around China began to emerge as early as 1991.

⁶ Backer, "China's Social Credit System: Data-Driven Governance for a 'New Era,'" 209.

⁷ Kostka and Antoine, "Fostering Model Citizenship," 5.

⁸ Although these pilot programs were not instigated by the central government, the CCP has been using these pilot programs as a model for the nationwide SCS and has been compiling data collected via these programs. It was only in 2014 when the State Council declared their intent to create a nationwide SCS that the central government began relying on the pilot programs. Centralizing big data has facilitated citizen surveillance and control over their personal data. The SCS's main goal, although constructed as a rewards and punishment system based on citizen and business behavior, is to *predict* rather than *prevent* the trustworthiness of its citizens, businesses, and political organizations. Some scholars even believe that the system's name is misleading and should instead be named the "social trust system."⁹ This leads us to believe that we need to address the Chinese SCS as a new kind of social credit system entirely, rather than rely on existing financial credit systems (or even allusions to 'Big Brother') as a model for our understanding.

This thesis provides **a meta-analysis of the existing literature on the Chinese Social Credit System to better understand its origins, implications, and perceptions.** It will do so by first analyzing the political history that enabled for such a system to come into place (its origins), examining the objectives of the system and the development of the system to date, the relationship between the private and public sectors in creating the system, and finally by analyzing the perceptions of the system thus far and explanatory frameworks through which to interpret these perceptions.

Since the literature on this subject is still very limited, this thesis compiles an array of information to create a more comprehensive narrative on the SCS, helping to fill many

⁸ Kostka and Antoine, 4.

⁹ Song, "The West May Be Wrong About China's Social Credit System," 33.

existing information gaps. The literature on the national SCS is also likely limited as the system has still not been completed and put in place. Nonetheless, this thesis assembles a variety of discourses that assess diverse aspects of the system.

Moreover, throughout this thesis the Chinese government will be referred to as the CCP, the central government, and simply as the government. These are three distinct terms. The CCP is the Chinese Communist Party. As a single-party state, the Chinese government is entirely run by the CCP. The Chinese president is therefore the leader of the CCP. The Chinese government is divided into three main branches: the central government, the CCP, and the People's Liberation Army. The central government overlooks the provincial and municipal branches of government across China. When referring to simply 'the government,' its definition encompasses both the central and local (i.e., municipal, provincial, etc.) governments.

Chapter 2: The Origins of the Chinese Social Credit System

China has implemented systems of mass surveillance for centuries. These systems, although primarily serving as an extension to the local policing system to better detect and report crimes and law-breaking, served both a political and military role in discouraging dissidence, while also strengthening local law enforcement. During the centuries of dynasty rule in China, these kinds of systems facilitated communication between the capital and rural areas. Because of the large size of the empire, the emperor often struggled to maintain a firm rule over rural areas that were less connected to the capital. Hence, by enforcing systems of surveillance that relied heavily on citizen participation, the emperor was able to maintain a tight grip on all corners of his empire.

Historians believe that these kinds of surveillance systems were rooted in the policies implemented by the Sung dynasty under Wang An-shih in 1070, although many other succeeding dynasties introduced systems whose elements also influenced later models, especially the most complex which was presented during the Qing dynasty.¹⁰ The Qing's model combined many different elements from the variations of these systems introduced since the Sung dynasty. This sort of a system first emerged as a tool to improve the detection and reporting of local criminals. The Sung dynasty soon expanded this system to reach the entirety of the empire, and within a year it became a subsidiary military system made to serve as a kind of local militia.

This chapter will analyze the systems of surveillance preceding that of the Qing dynasty, the systems used by the Ming dynasty, the systems used by the Qing dynasty, most

¹⁰ Hsiao, *Rural China: Imperial Control in the Nineteenth Century*, 27.

notably the *baojia* and *lijia*, as well as the system of "criticism and self-criticism" led by Mao in Communist China. Finally, the chapter will briefly examine a system of rewards and punishments established by the *Kuan-tzu*.

This chapter will also serve as a prelude to understand the context in which the national SCS exists in China. While in the US we may view this system as one that presents an entirely novel concept of social surveillance, Chinese citizens have a long history of surveillance systems of this sort (without the technological advances). Today's social credit systems, both government-run and commercial, portray many elements of these historical systems.

2.1: Preceding Systems

Some historians believe that the *baojia* of the Qing dynasty was rooted in the systems of local governance discussed by the *Kuan-tzu* and *Chou-li*, two very influential writings in ancient Chinese thought. The *Kuan-tzu* included a variety of systems of divisions with diverse functions, while the *Chou-li* adopted a wider range of functions such as military organization and local peace.¹¹

The Qin and Han dynasties also developed systems of local governance that historians believe also developed from the *Chou-li*.¹² Systems of local governance include systems of policing and of mass surveillance, which extended the central government in Beijing's scope of control and influence. Additionally, Sui dynasty Emperor Wen-ti in AD 589 established the first system of policing in imperial China.¹³ Emperor Wen-ti grouped

¹¹ Hsiao, 26.

¹² Hsiao, 26.

¹³ Hsiao, 26.

every five households into a *pao*, every five *pao* into a *lu*, every four *lu* into a *tsu*, with a *cheng* appointed as a leader of each of these divisions.¹⁴ Different *cheng* were appointed to lead the individual divisions. These divisions existed only outside the imperial capital. The Tang dynasty was the first dynasty to combine policing with census-taking and revenue-collection.¹⁵

The system that most closely informed that which was established by the Qing was the *baojia* of the Sung dynasty, introduced by Wang An-shih in 1070.¹⁶ The Sung system was the first to adopt the name *baojia* (later used by succeeding dynasties). They were also the first to make the reporting and monitoring of criminals its most important function. The system was quickly adopted throughout the empire and within a year used as a local permanent militia and as a subsidiary of the military system.

2.2: Systems of Control under the Ming Dynasty

Early after the Ming state was established, the government created four systems of administrative control. The systems that previous dynasties implemented heavily influenced these used under the Ming. Emperor Hongwu, who ruled between 1368 and 1398 and founded the Ming Empire, knew that the initial success of his newly-founded empire relied heavily on maintaining more or less its existing social structures and networks, rather than rebuilding these into entirely novel systems.¹⁷ A complete disruption of the existing sociodemographic and geographic divisions would likely have led to heavy

¹⁴ Hsiao, 26.

¹⁵ Hsiao, 27.

¹⁶ Hsiao, 27.

¹⁷ Brook, *The Chinese State in Ming Society*, 2005, 20.

opposition against the Emperor's changes, which as a newly established empire the national government wanted to avoid.

The Ming Dynasty established four interconnected, and sometimes overlapping, systems to better execute administrative procedures throughout the empire.¹⁸ These systems were especially necessary in rural areas where the Emperor's rule was much more distant and less influential. The first system was a territorial division of existing counties into a hierarchical system consisting of cantons, townships, and wards. The second system, known as *lijia*, was a fiscal tithing system that grouped households geographically. The third system, known as *baojia*, was a watch system that grouped households into neighborhoods for surveillance purposes. Finally, the fourth, which was present in only some areas of the empire, created rural covenants, or *xiangyue*. Each of these systems created artificial administrative divisions, which opposed (although there was almost no overlap) natural and social divisions. Additionally, there were many inconsistencies in the naming of these systems throughout the empire, as the magistrates led the implementation of these in each region.¹⁹

An important distinction between the systems established by the Ming and succeeding systems was that the Ming found it difficult to proliferate their systems throughout their empire and to ensure they were followed closely. This was especially the case with the *lijia* system, where many households would avoid registering all individuals that lived in the household or for adjusting the registrations when household members left

¹⁸ Brook, 19.

¹⁹ Brook, 21.

(i.e., through marriage) to avoid future generations having to pay taxes. Many would also be exempted by registering as farmers and farm laborers.

2.2.1: Counties

The counties served as the lowest level of the state bureaucracy. Magistrates, who were in charge of the counties, held the lowest bureaucratic appointment. These county magistrates reported to the central government. In its first three years, the Ming Dynasty created over 887 counties, and this number rose to 1,159 by the end of the dynasty.²⁰

Not all counties were subject to the same territorial divisions of levels and units. There are three main structures that divided counties throughout China.²¹ The standard structure, most commonly found throughout the empire, divided counties into three sub-county levels—cantons, townships, and wards. The abbreviated structure, which was most frequently found in northern China and areas with low population density, had two levels—cantons and wards. Additionally, the elaborated structure was used in some densely-populated areas, with a structure that included a fourth tier between cantons and townships—a sub-canton. The names used at each level also varied frequently between different regions, especially between counties in northern and southern China.

²⁰ Brook, 21.

²¹ Brook, 22.

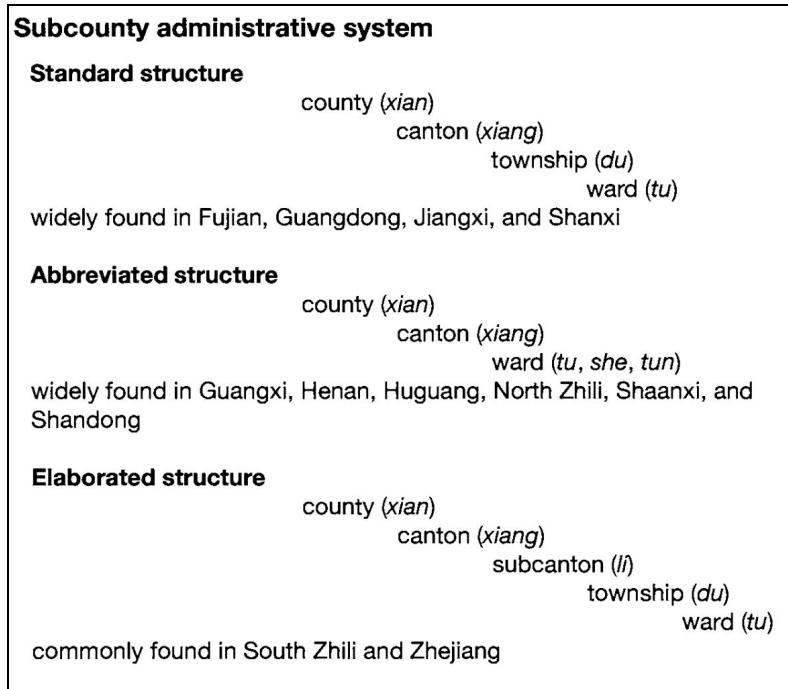


Figure 2.1: Divisions of Counties in Ming China²²

The Ming developed these subdivisions based on existing geographical divisions introduced in previous dynasties. The Song and Yuan also used the divisions of cantons (*xiang*) before the Ming.²³ The Qin and Tang dynasties also used *li* or sub-cantons as the main subdivision of a canton, found in the Ming's elaborated structure.²⁴ The township, or *du*, was a part of Wang An-shih's *baojia* system used in the 1070s.²⁵

²² Brook, 22.

²³ Brook, 22.

²⁴ Brook, 24.

²⁵ Brook, 24.

2.2.2: *Lijia*

The *lijia* system organized households for taxing and census purposes by creating a tithing system. By 1381, the system had been widely used throughout the empire.²⁶ By grouping households and mandating fiscal obligations, the *lijia* placed households under neighbor-controlled supervision. Citizens were not only responsible for fulfilling their own duties, but also for ensuring that their neighbors were as well. Households became responsible for their entire grouping of households. The *lijia* established by the Ming lasted for centuries across future dynasties and rules in creating systems that group households into multiples of five and ten.

The tithing groups were ten fiscal households (a *jia*) where the head of each household would rotate the role of tithing head, known as the *jiashou*. Each of these groups would form a *li*, or a group of one hundred *jia*, and ten households would serve as the leaders of this hundred, known as the *lizhang*. Each of these ten households would rotate their leadership role and were selected because they were deemed the ten most responsible households in their *li*. In urban areas, the *li* were called *fong*, and in suburban areas they were frequently called *xiang* (not to be confused with the *xiang* in the county system). Figures published in 1461 reported that China was divided into 64,854.5 *lijia* hundreds.²⁷ Another source from the late 1660s reports that this number grew to 68,929.5 *lijia* hundreds.

Because the magistrates served as the lowest level of government, these divisions with leaders at each level allowed for the magistrates and central government to better

²⁶ Brook, 32.

²⁷ Brook, 33.

control rural areas with spread out populations. The system was very successful in managing fiscal control over the widespread Chinese population. However, by the sixteenth century the *lijia* system had lost much of its control over rural populations and other systems of control, such as the *baojia*, became more effective in controlling these populations.

2.2.3: Baojia

The *baojia* system aimed to surveil and monitor the Chinese populations outside major urban areas. The system was built on the same logic of divisions that informed the *lijia*. However, unlike the *lijia*, the Ming did not implement the *baojia* nationwide. The system was formally introduced and implemented by 1548 nationwide, although implementation was not made mandatory.²⁸ The central government left it to the magistrates to implement the *baojia* in their counties. The system intended to reduce crime and dissent towards the imperial government, frequently seen in the form of coastal piracy in the southeast coast or banditry in the interior regions of the empire. Although the *lijia* was meant to establish some form of security and surveillance through its system, by the sixteenth century the *lijia* had become mainly fiscal, which created a need for a system solely addressing surveillance. By the end of the Ming dynasty's rule, the *baojia* system was spread across over half of the empire.

One main difference between the *lijia* and *baojia* was that the *lijia* divided by households, while the *baojia* divided by families.²⁹ Hence, the *baojia* attempted to more

²⁸ Brook, 36.

²⁹ Brook, 36.

closely resemble natural societal boundaries. Wang An-shih's first *baojia* system established in 1076 consisted of several different levels. The smallest unit was composed of ten families, named a *bao*. Later in most Ming *baojia* systems, the ten-family unit was named a *jia* (a tithing) and ten *jia* formed a *bao* (a watch). Each tithing or *jia* had a placard (*pao*) which rotated amongst the tithing households to signify a tithing leader. The tithing leader was known as the *jiazhang* (tithing captain) or *jiazhong* (tithing overseer), where the terminology varied by region. The head of each watch (the *bao*) was named a *baozheng* (watch supervisor) or *baozhang* (watch captain).

This structure represents how the Ming intended to implement the system, although not all areas in China applied it in the same way. Although this was what the government mandated, some magistrates and local leaders applied the system in ways that best fit the context in each area. The southeast coastal area most closely mirrored the intended structure. However, some tithings throughout the rest of the empire had anywhere between four and thirteen families, and some watches had over or fewer than ten tithings.³⁰

A distinct account of the implementation of the *baojia* in China can be found in records kept by Wang Shou-jen. In the Ming dynasty between 1517 and 1520, Wang Shou-jen, a government official and notable philosopher, created a system of registration for households in his region where every ten households were required to record their members on a card and to report to the government any suspicious activity reported in their neighborhoods.³¹ During those years, Wang Shou-jen adopted this policy in an attempt to reduce robbery and rebel activity in Kiangsi. The ten households in each unit

³⁰ Brook, 37.

³¹ Hsiao, *Rural China: Imperial Control in the Nineteenth Century*, 27.

were responsible for reporting any suspicious activity. However, different to its predecessors and later successors, this system was only applied to a select number of localities given high numbers of criminal activity at the time. There were also no designated leaders for each ten households, but instead the heads of households took turns leading the record-keeping. In 1520, the government began appointing heads for each unit, called *bao-chang*, but these did not have any control over the activity of the ten households other than monitoring criminal activity together with the heads of the households. The main importance of Wang Shou-jen's system is that it created a local system of joint responsibility to monitor local activity.

2.2.4: Covenants

Rural covenants, known as *xiangyue*, were found in some areas of China used by county officials to reform taxation and security. The system created groups of one hundred households, named covenants or *yue*, which were to convene regularly at a Covenant Recitation Hall (known as a *jiangyue suo*) to perform rituals and rites supporting loyalty to the dynasty and strong community membership.³²

The covenants arose later in the dynasty, as a means to reestablish the sense of loyalty and control that the *lijia* had once achieved. In the early sixteenth century, the *lijia* lost its momentum and county magistrates aimed to use the covenants to strengthen control.

³² Brook, *The Chinese State in Ming Society*, 2005, 38.

The covenants also worked closely with the *baojia*, which also came about around the same time in the early sixteenth century. Although throughout the sixteenth century these two systems were only loosely related, by the early seventeenth century these systems were working symbiotically to improve state control in rural areas. The established watches in the *baojia* convened as covenants to organize other aspects of social life, such as public education, and to circulate political information.

2.3: Systems of Surveillance under the Qing Dynasty

In 1644, the Qing Dynasty was established. Although a change in dynasty led to many changes in how the empire was to be ruled, the Qing emperor decided to continue, while also heavily improving, a system of surveillance first established by the Ming dynasty. While the Ming had not fully developed the system of tithing used in rural areas throughout the empire to monitor its citizens' behaviors, the Qing took it upon them to complete the imperial structure and develop it throughout the empire. The founders of the Qing dynasty, following the old Chinese axiom that "the empire could be conquered but not ruled on horseback," they relied on using techniques of control established by previous empires in addition to military rule to maintain power.³³

The Qing found it particularly important to employ such a system in the empire as they were alien conquerors of China, which meant that establishing strong control was urgent and necessary.³⁴ This control was more important for them than for the Ming rulers, as the Ming took over the alien rule of the Yuan and were a native dynasty.³⁵ Additionally,

³³ Hsiao, *Rural China: Imperial Control in the Nineteenth Century*, 43.

³⁴ Hsiao, 4.

³⁵ Hsiao, 4.

given that the locals were to have better knowledge about their people and policing locally than their rulers who originally were foreign to China, this system facilitated the Qing's transition into power in the rural areas of the empire.

Although rural groups and divisions existed prior to the Qing's system of surveillance, this established politically made artificial divisions meant to overlay the existing divisions.³⁶ Therefore, the units of rural division established by the government did not always follow the existing local divisions.

The Qing dynasty established two main systems of surveillance at the start of their rule: the *baojia* (seen as *pao-chia* in old PinYin) and the *lijia* (seen as *li-chia* in old PinYin). The former was established as a policing system, extending law enforcement to rural areas, and the latter as a taxing system. Both systems encouraged local self-governance and diminished the number of state-appointed officers to each town or village, as these were all employed locally. Essentially, the systems developed into a form of local militia. Overall, the *baojia* and *lijia* systems intended to facilitate record-keeping of citizens, reporting of crimes and suspicious activity, general control over citizens' daily activities, and any dissidence against the government.³⁷ The general consensus understood by the government was that local citizens would be more likely to act prudently if made to supply their own police officers and spies, given that anyone could report you even if no government officials were monitoring the towns, than if policing were solely controlled by government-appointed policemen.

³⁶ Hsiao, 6.

³⁷ Hsiao, 7.

2.3.1: *Baojia*

The *baojia* system was established as a system of policing in the rural areas of the empire. Adopted from a simplified version introduced by the later rulers of the Ming dynasty, the *baojia* intended to monitor and control the behavior of its citizens.

The Qing rulers were primarily concerned with imperial security and discouraging citizens from political dissidence and self-reliance.³⁸ The emperor sought to hold all power over its citizens and ensure that citizens remained in awe of his power.³⁹

The *baojia* extended throughout the rural parts of the empires, excluding the main imperial cities and the imperial capital. The *baojia* divided up villages and neighborhoods into divisions that superimposed existing territorial boundaries. The magistrate, which was the lowest unit of government, rarely engaged in direct contact with the rural towns and villages.⁴⁰ Therefore, without such a system, many towns and villages would have been left outside of a political scope of surveillance. Hence, the *baojia* allowed the government to increase its scope of surveillance and better control most if not all rural areas. The system divided up the rural areas by the following guidelines:

"Every ten *hu* (households) were arranged into one *pai*, for which a *pai-tou* (head of *pai*, sometimes called a *pai-chang*) was set up; every ten *pai* constituted a *jia*, the head of which was known as *jia-cheng* or *jia-tou*, and every ten *jia* formed a *pao*, which was placed under the care of a *pao-chang* or *pao-cheng*."⁴¹

³⁸ Hsiao, 8.

³⁹ Hsiao, 8.

⁴⁰ Qu, *Local Government in China under the Ch'ing*, 151.

⁴¹ Hsiao, *Rural China: Imperial Control in the Nineteenth Century*, 28.

The *baojia* served three main functions.⁴² The first was to register households and their inhabitants in each neighborhood and village. The records would inform on all inhabitants of a household, all movements of individuals and households, including in temples and hostels, and kept an up-to-date registry of all citizens. Although it appeared to be a census system, its scope reached far beyond that to include the responsibility of all citizens to monitor and report any crimes observed in their neighborhoods. The records facilitated the link between the individual reports and the recorded citizens and individual movements of people. The second main function was to record all crimes and violations of the law observed in each division. Every inhabitant was required to report any suspicious activity to the heads of each *baojia*, who were responsible then for reporting these to local government authorities. If any inhabitant of the division failed to report observed crimes, not only their household would be punished, but also the rest of the households in their division. The imperial government also imposed severe punishments on any households or individuals who were not registered in the system, as this would hinder administrative policing controlled by using records of every citizen. Thirdly, the local inhabitants were the ones operating the *baojia* system, and local government-appointed officials supervised it while not directly participating in the record-keeping. Employing local citizens also meant that the imperial government could reach the farthest corners of the empire without having to employ additional government officials.

Overall, the system encouraged citizens to spy on each other and also motivated citizens to report their own wrongdoings over the risk of their neighbors doing it for them

⁴² Hsiao, 45.

(self-reporting would decrease the severity of the punishment).⁴³ Because such a level of fear and suspicion grew amongst citizens, very few attempted to dissent from the imperial government. This essentially established that "one's activities could hardly escape the eyes and ears of one's neighbors."⁴⁴ This also built trust amongst citizens that, given how widespread the system was, any suspicious activity from others would be rapidly punished. Therefore, not only would citizens be discouraged from acting unlawfully, but they would also live more relaxed knowing that if anyone committed any crime they would be punished accordingly for it. Although, some officials even encouraged good conduct by providing incentives or sorts or rewards for model citizen behavior.⁴⁵

Family also played a very important role in the *baojia*, as the distinction between a family and a household became more clearly defined once policing policies used 'family' as part of their system. The concept of 'family' under the *baojia* was now being used as a mechanism through which to police citizens and it renegotiated traditional family-based notions of power in areas that now created tools to use for policing.⁴⁶ Families were made much more socially visible under this system and it created an idealized form of family moral and ethical values. Under the spotlight, families were held to much higher standards than previously.

It is complicated to comprehensively evaluate the success of the *baojia* as little information was preserved on the system's efficacy. However, we can presume that the system was at least successful to an extent in contributing to the stability of the Qing, as the

⁴³ Hsiao, 46.

⁴⁴ Qu, *Local Government in China under the Ch'ing*, 150.

⁴⁵ Qu, 150.

⁴⁶ Dutton, *Policing and Punishment in China*, 35.

dynasty was one of the longest lived in Chinese history.⁴⁷ Nonetheless, the system gradually disappeared during the final decades of Qing rule, as the system no longer met imperial standards.⁴⁸ However, since the system was a crucial pillar in Qing rule, the system had to "stand or fall with it."⁴⁹ Many edicts were written by emperors throughout Qing imperial rule to strengthen and adjust the system to changing political times and to avoid the deterioration of political rural control. Nonetheless, by the end of the nineteenth century, it was clear that the *baojia* as a tool for policing had almost completely been eradicated.

Other faults in the system are that, given that the *baojia* heads were local citizens, many of them were illiterate and could not personally verify the accuracy of the records (which they were expected to do as part of their duties).⁵⁰ Once these records reached the yamen, clerks were to transcribe them into official registries, although the clerks were minimally invested in policing, which meant they frequently input this information carelessly. Most magistrates would also send out the registries sent by the clerks without checking them for accuracy. These errors were consequently spread up the political hierarchy ladder. Another important element of the *baojia* that eventually caused larger problems was that each house was required to have a *men-pai*, or a door placard that listed the names of the inhabitants of every household. This, however, was difficult to enforce in the latter years of the Qing empire as they were not frequently updated and citizens were required to finance these placards on their own, which many peasants could not afford.

⁴⁷ Hsiao, *Rural China: Imperial Control in the Nineteenth Century*, 7.

⁴⁸ Hsiao, 8.

⁴⁹ Hsiao, 8.

⁵⁰ Hsiao, 75.

Few households updated these regularly, which meant that records of inhabitants in each *baojia* were frequently incorrect, leading to additional inconsistencies in the records.⁵¹

Although the *baojia* system never fully met imperial expectations, it was very successful in strengthening control over the rural parts of the empire. Levels of criminal activity recorded after its implementation became much lower, and this success alone already made the system somewhat successful in achieving its set goals.

2.3.2: Lijia

Four years after the *baojia* was first introduced, the Shun-chih emperor in 1648 implemented the *lijia*.⁵² The *lijia*'s main purpose was to collect revenue as a greater taxation system. The roots of this system can be found in the *lijia* of the Ming dynasty, which was based on the *li-she* of the Yuan dynasty. In the *lijia* system, the organization of households was established as follows:

"every 110 households in the rural areas were to constitute a *li* in which the heads of ten households that had the largest number of tax-paying adult males were to be elected *li-chang* (heads of the *li*). The remaining 100 households were, as in the Ming system, to be divided evenly into ten *jia*; each of the latter was to elect a *chia-chang* (head of the *jia*, the equivalent of the *jia-shou* in the Ming system). Similar groupings of households were to have different names. In the cities every 110 households formed a *fang* (instead of a *li*), whereas in the suburbs they formed a "Hsiang"."⁵³

⁵¹ Qu, *Local Government in China under the Ch'ing*, 152.

⁵² Hsiao, *Rural China: Imperial Control in the Nineteenth Century*, 32.

⁵³ Hsiao, 32.

The *chia-chang* were to collect tax records of each of the eleven households in their division and of reporting them to the division leaders above them, namely the *li-chang*, *fang-chang*, or "*Hsiang*"-*chang*, who would then send the reports to the local yamen, where the main government officials operated.

Each *li-chang* was chosen from one of the ten households with the largest number of male adults.⁵⁴ Each of the ten households would rotate in providing a *li-chang* every year.

2.3.3: Relationship between the *Baojia* and *Lijia*

The *lijia* was assumed by the *baojia* in the middle of the eighteenth century, although the exact timeline of this change is unknown.⁵⁵ However, at their inception these were two different law enforcement instruments that served very distinct purposes. The *baojia* correlated to the penal code dealing with crimes and criminals (the *hsing-lü*), while the *lijia* enforced laws concerning finance and taxing (the *hu-lü*). The Qing government did not want any group leaders to obtain too much power, which is why initially they felt it necessary to dichotomize these systems.

Nonetheless, both systems did have some functions that overlapped, although they were enforced separately. Primarily, both systems were tasked to register and monitor the number of households in a given area and the citizens that inhabited them. However, the *lijia* did this to calculate the number of taxes that needed to be collected, while the *baojia* did this to keep an updated record of suspicious and criminal activity.

⁵⁴ Qu, *Local Government in China under the Ch'ing*, 135.

⁵⁵ Hsiao, *Rural China: Imperial Control in the Nineteenth Century*, 60.

2.4: Criticism and Self-Criticism

"Criticism and self-criticism," established under Mao Zedong as part of the Cultural Revolution in the late 1950s and 1960s in Communist China, served as a system of surveillance and control under communism. The system encouraged public criticism, frequently through the media, of both the Party and of Chinese citizens.⁵⁶ Although all citizens were to practice "criticism and self-criticism," the role the media played in enforcing and publicly shaming citizens was very important in proliferating this system.

As opposed to the imperial systems of surveillance, "criticism and self-criticism" emphasized the importance in self-reporting and self-shaming to induce 'better' behavior as deemed by the central government. This system is rooted in the communist framework in place at the time of the system's inception. The system did not intend to control all criminal activity in rural areas of the empire, but rather aimed to dissuade citizens from opposing the party and its mandates. The Chinese system of "criticism and self-criticism" was also modelled after the "kritika i samokritika" system used in Soviet Russia.⁵⁷

It was also very important that party officials and the media were included in self-criticizing and the mass publication of such, as that pressured regular citizens to dissent. The act of criticizing and self-criticizing was practiced by group sessions, where each citizen was asked to self-criticize and then accept criticism from all others in the group.⁵⁸ Whenever a person criticized another person or entity (which they were encouraged to do freely), they also were forced to engage in self-criticism as part of a

⁵⁶ Chu, "Press Criticism and Self-Criticism in Communist China," 47.

⁵⁷ Chu, 48.

⁵⁸ Chu, 48.

cyclical ritual. This is why "criticism and self-criticism" are often grouped into one process, as they almost always were to be reproduced together.

The technique of criticism often involved the temporary alienation of a single member of a group by encouraging collective criticism. The group would engage in heavily criticizing the individual for their wrongdoings, encouraging them to understand how their behavior can be adjusted to better fit the intentions of the CCP.⁵⁹ Common types of acts that citizens were shamed for included "faulty ideological understanding, poor work performance," or other types of deviance or political dissent. The individual being criticized was also expected, after being criticized by others in the group, to self-criticize and identify their own faults of action.

The media also heavily engaged in "criticism and self-criticism" as they would publish news coverage, editorials, and readers' letters informing on activities in "criticism and self-criticism." Additionally, the press would also participate in self-criticism through these means, and would also publish criticism that its readers would submit on their publications. Since the press in China was run by the Communist Party, self-criticism published by the media was interpreted as the Party's self-criticism as well.

Mao saw this system as one to create unity amongst the people and "cure sickness and rescue" dissenting citizens.⁶⁰ He saw the system as one not to publicly embarrass citizens, but as one that would solve problems and encourage 'positive' (in the eyes of the communist government) change. Mao framed the kind of criticism he hoped citizens would engage in as constructive, rather than destructive.

⁵⁹ Dittmer, "The Structural Evolution of 'Criticism and Self-Criticism,'" 709.

⁶⁰ Chu, "Press Criticism and Self-Criticism in Communist China," 50.

Furthermore, the system was not codified into distinct laws so that it could be reframed as needed throughout its course. Its execution, therefore, fully depended on the Party's enforcement which determined "whom, what, when and how to criticize."⁶¹

Another important component of the system was the advantage technology at the time gave the CCP to publicly shame citizens, a function of the system that the Qing and other dynasties could not take advantage of in punishing criminals. CCP elites were thus able to quickly proliferate criticisms throughout the nation without the need for face-to-face communication between the criticized and criticizing parties.⁶²

Overall, while "criticism and self-criticism" differed significantly from the intentions of the *baojia* and other surveillance systems established throughout Imperial China, the system itself was also an important system of surveillance used by the government to ideologically and socially control the behavior of its citizens.

Similar patterns and elements of "criticism and self-criticism" are still found today in the social credit systems in modern-day China. The Chinese government is publishing redlists ("good" citizens) and blacklists ("bad" citizens) on public website Credit China.⁶³ These redlists and blacklists include information on each citizen and either publicly praise or publicly shame them for their actions. This concept of publicly shaming through these lists mirrors the public shaming that occurred during Mao's era through "criticism and self-criticism." In both cases, the purpose of public shaming was to both punish citizens and also help them realize their mistakes to correct their behavior. Therefore, while "criticism

⁶¹ Chu, 52.

⁶² Dittmer, "The Structural Evolution of 'Criticism and Self-Criticism,'" 716.

⁶³ Engelmann et al., "Clear Sanctions, Vague Rewards," 72.

and self-criticism" was a policy specific to Mao's China, these kinds of practices still remain in China today and clearly influenced Chinese political culture.

2.5: Rewards and Punishments Systems in Ancient China

Under the *Kuan-tzu*, law enforcement depended heavily on the use of rewards and penalties to incentivize citizens to act lawfully while disincentivizing unlawful behavior.

This system of rewards and punishments was instituted as a result of the observed psychological tendency of human beings to respond effectively to acts of liking and disliking.⁶⁴ As written in the *Sacred Edict*, "the nature of all men is such that seeing advantage, there are none who will not seize it, and seeing harm, there are none who will not avoid it. If a ruler carefully judges whose advantage and harm lie in devising his rewards and penalties, then the people will conform to his will in those things which they seize and those which they avoid."⁶⁵

However, also in the *Sacred Edict*, the *Kuan-tzu* emphasized that these rewards and punishments must carry heavy weight or their intentions would not be upheld. If the rewards are not sufficiently advantageous, people will see no positive result in pursuing changes in behavior for these rewards. Clarity in the most significant laws that must be followed is also important to establish a strong sense of understanding amongst citizens of what should and should not be pursued. The *Kuan Tzu* also noted the importance of its citizens following the "eight principles of duteness, subordination, loyalty, sincerity,

⁶⁴ Hsiao and Mote, *History of Chinese Political Thought, Volume 1*, 344.

⁶⁵ Hsiao and Mote, 344.

propriety, justice, purity, and a sense of shame" to maintain order in any given society.⁶⁶ By these standards, if any citizen breaks these, they are to be severely punished.

Clearly, the rewards and punishments system present in China today through social credit systems are not new and have been in China since ancient times. Chinese philosophers, as seen in the *Kuan-tzu*, were emphasizing the importance of this behavior change mechanism centuries before Xi implemented it as part of his social credit systems. Like with other elements of the system that have been influenced by historical patterns, this too has very ancient roots. Also, as a concept brought forth through Chinese thought, these preachings have had a significant influence on Chinese culture and practices. Since ancient times, concepts such as rewards and punishments continue to prevail.

2.6 Conclusion

The systems discussed in the section span a few of the many historically established in China to establish political surveillance of citizens through the Chinese empire or nation in the case of Communist China. These systems utilized social control and individual self-reporting to impose control throughout all citizens regardless of their area of residence and proximity to major cities or the capital. The Ming dynasty, aiming to gather more efficient control than previous dynasties, created four systems of geographic and demographic division. These included the county system, the *lijia* for tithing, the *baojia* for surveillance, and in some areas the covenant system. These four systems greatly influenced future systems implemented in imperial China, especially by the Qing, to improve imperial

⁶⁶ Qing and Baller, *The Sacred Edict of K'ang Hsi*, 89.

control. The systems, particularly the Qing's *baojia*, was informed by all preceding systems, adopting their successes and avoiding their flaws and proven mistakes. All these systems, even "criticism and self-criticism" which held different intentions, provided a strong system of control over Chinese citizens and incorporated many similar attributes and functions.

These systems are very important in understanding the present-day Social Credit System being established in China, as Chinese citizens for centuries have been surveilled in these ways which has made today's system much more socially acceptable locally. The *baojia* and *lijia* created a culture historically where citizens became accustomed to constant surveillance and control, as that became their sociopolitical norm. The practices in these systems have also prevailed for centuries as elements of each of the *baojia*, *lijia*, and other systems are not only found in each dynasty's equivalent of these, but even in policies presented during Mao's China and also in present-day. Chinese leaders have been employing these practices for centuries given their success domestically. This helps us better understand why a system such as the Chinese social credit system came about under Xi. These elements of social credit systems in China will be discussed further in later chapters.

One limitation in the scope of information on historical systems of policing and surveillance in China is that most research discusses this topic from an institutional perspective. It analyzes the policies using information from political records. Little to no records exist on first-hand perspectives of what these policies were like and how they affected individuals as seen through their experiences.

Chapter 3: Big Data in China and the Objectives of the National Social Credit System

As the country with the most internet and mobile users in the world, China has one of the most extensive markets for data collection.⁶⁷ Throughout the years China has collected a considerable amount of data through its smart cities, its rapid development of the Internet of Things (IoT), the creation of numerous information systems around the country, in addition to its rapid growth in internet usage. These have all heavily influenced the potential for big data usage in the country. Big data analysis allows for governments, businesses, and organizations to make well-informed decisions and influences their overall policymaking. This provides opportunities for rapid economic growth, innovation, and restructuring where need-be, improving China's overall political and economic performance, especially in light of pressures Chinese leadership is facing on a global scale as one of the world's largest economies and developing countries. For decades China differentiated itself in the global markets by its mass production approach. However, this strategy no longer allows for Chinese businesses to differentiate themselves; therefore using big data to inform their decisions can accelerate production and policy decisions to increase innovation. Using big data also means that small- and medium-sized businesses can also participate in innovation, as previously mass production was limited to large-scale businesses.

The market for big data in China is unique because of the centralized control the government holds over citizens' data. In democratic nations, big tech companies have generally controlled this big data through a variety of mechanisms that allow them to

⁶⁷ Liu et al., "An Overview of Big Data Industry in China," 1.

collect this data on citizens to monetize. However, because China's authoritarian government regulates internet usage and how businesses are allowed to operate, all big data, regardless of who is collecting it, is ultimately shared with the government.

Therefore, to create its national Social Credit System, the government is operationalizing data collected from different actors, including local governments, private businesses, and organizations to create its big data database to construct the system. Over 400 organizations are contributing data to the government's database to then be aggregated and made meaningful. This data will inform the regulations the government intends to impose through the rewards and punishments system they are building, which will be an extension of the legal system currently in place. Because corruption levels in law enforcement are extremely high, the SCS is in part aiming to make the rule of law system more just.

In 2015, thirty-five percent of businesses in China reported having to give official bribes or gifts to government officials to maintain their operations, where paying bribes is considered an "unspoken rule."⁶⁸ With such high numbers of reported bribes (and most cases of bribery are not made public), President Xi Jinping initiated a strong anti-corruption campaign in 2012 at the 18th Party Congress to reduce corruption in the public sector. In the first half of 2017 alone, over 1.31 million complaints were made to the Central Commission for Discipline Inspection (CCDI), over 260,000 cases were opened, and over 210,000 public officials suffered punishments over corruption.⁶⁹ The national SCS, managed entirely technologically, aims to reduce the bias in the rule of law system when

⁶⁸ Charney and Qazi, "Corruption in China: What Companies Need to Know," 1.

⁶⁹ Lakic, "China: More Than 210,000 Officials Punished for Corruption in 2017."

dealing with corruption cases and facilitate the investigation and enforcement processes for the anti-corruption officials. However, it is also important to note that state programs fighting corruption in the past have been a "reliable means of perpetuating the very problem they intend to eradicate."⁷⁰ Therefore, while the government claims that they intend to fight corruption with the national SCS, it is unlikely that they will be effective in doing so.

China is frequently criticized by Western media for its poor attempts at curbing corruption. *Guanxi*, or relationships/connections, is the core component in the culture for corruption in China. While the term itself, which emphasizes the importance of building close relationships with those around you, does not encourage corruption, it has created a culture for corruption in the country.⁷¹ *Guanxi* leads citizens to seek approval or advantages in commercial and business endeavors, admission to private schools, or job offers for political roles. Moreover, Xi's anti-corruption campaign has thus far been more productive in targeting and removing political enemies than it has at targeting corruption within the government.⁷² Since implementing the anti-corruption campaign, researchers have still found that many private businesses with extensive political connections are growing faster than others and are receiving preferential treatment through bank loans.⁷³ Therefore, Xi's attempt to shape the national SCS as an additional effort in his anti-corruption campaign might prove impotent given the campaign's success rate up until now.

⁷⁰ Lilly, "Why China's 'Social Credit' Scheme Will Create More Corruption, Not a Better Citizenry."

⁷¹ Hui, "China's False War on Corruption."

⁷² Hui.

⁷³ Taplin, "China's Corruption Paradox."

This section will first discuss the case of China in examining the market for big data, followed by a discussion of the local pilot programs currently in place. The section will then continue by discussing the State Council document outlining the goals and structure of the system, also examining the rewards and punishments system to enforce the SCS, as well as a brief discussion of the collaboration between the CCP and private businesses. Finally, the section will examine the three phase framework as discussed by Liang et al. (2018) to understand how the government is aggregating data to construct the SCS.

3.1: The Market for Big Data in China

Big data in China has historically been in the hands of the government which controls all online activities nationally. Although the internet was established as a medium to lower the barriers to communication and interpersonal connections by diminishing the power in the hands of the gatekeepers, China has undermined this goal by establishing online systems of censorship.⁷⁴ The Chinese government has established a separate web of information online by regulating internet activity nationally that remains almost exclusively Chinese. The government has done this through the Chinese firewall, the regulation of news diffusion, and by ensuring that the backbone of internet control in China is managed by Chinese companies.⁷⁵ Censorship in China is also found at multiple government levels as information transparency is very hierarchical and limited between the different tiers of government, where only some tiers of officials have access to the information circulated within the central government. The CCP sets the general regulations

⁷⁴ Bolsover, "Slacktivist USA and Authoritarian China?," 455.

⁷⁵ Stockmann, "Toward Area-Smart Data Science," 394.

to be taken into effect nationally, and provincial and local governments employ region-specific regulations as assigned by the central government. Additionally, the government works with a variety of businesses, organizations, institutions, industries, and technologies to further apply censorship nationwide. Therefore, censorship in China is not necessarily standardized by the national government.

Big data is in high demand globally because of its dynamic and weak structure, meaning that the information can be put together in countless different ways but unless connected, each of the individual points can be meaningless.⁷⁶ This facilitates surveillance for governments as citizens are more unaware of what data is being collected on them and how it is being used; however, governments and organizations can put the information together to gather meaningful insights.

Individual data points are of little value on their own. These individual points are generally unbiased and neutral because on their own they provide little information on a person. However, this is not the case for big data, which is a conglomeration of these individual data points that gives meaning to each of them. Unlike the individual data points, big data is not objective or neutral and provides extensive information on an individual and their behaviors and preferences.

Another important characteristic of big data, specifically in terms of big data surveillance, is that the machines that are surveilling do so predictively, rather than passively. These machines aim to find patterns and correlations between individuals' behavior to predict these moving forward. Because of the possibilities for surveillance big

⁷⁶ Lyon, "Big Dataveillance: Emerging Challenges," 1.

data enables, it is extremely valuable for governments and businesses alike.⁷⁷ In China, these organizations look to 'foresee the future' by surveilling citizens and users to employ "anticipatory governance."⁷⁸ This means that the government, through its rewards and punishments system, looks to influence citizens' future behavior which is predicted using big data. The government will enforce rewards or punishments based on how they anticipate the citizen will act in the future, controlling this outcome through either a reward or punishment to fit how the government intends for them to act. Lyon explains that through China's current use of big data, "a person's data shadow does more than follow them; it precedes them, seeking to police behaviours that may never occur."⁷⁹

3.2: Local Pilot Programs

Currently, forty-three local governments have instituted pilot scoring programs, which the national government is utilizing as tests to understand both the boundaries of the system and the feasibility of the program nationwide.⁸⁰ These local programs demand mandatory participation from all citizens.

The first local SCS surfaced in 1991 intending to resolve emerging issues in the financial sector.⁸¹ Many other local governments followed this original model in developing their own local SCSs. It is important to note that these local governments developed these systems aside from the national financial goals of the CCP, meaning that they were created to further the financial goals of local governments. It was only in 2014 when the State

⁷⁷ Lyon, 2.

⁷⁸ Lyon, 6.

⁷⁹ Lyon, 6.

⁸⁰ Kostka and Antoine, "Fostering Model Citizenship," 2.

⁸¹ Kostka and Antoine, 4.

Council published the "Planning Outline for the Construction of an SCS" that the concept of a national SCS was first addressed.

The local pilot programs and the national program differ greatly in terms of their objectives. While the State Council declared that the national SCS intended to change citizens' behavior by focusing on trustworthiness as a central pillar, the local SCSs intended to monitor their citizens' financial activity. Both systems incentivize citizens through a rewards and punishments system.

Of the forty-three active local SCSs in 2018, twelve were selected by the National Development and Reform Commission (NDRC) and the People's Bank of China (PBC), two organizations working closely with the CCP to construct the national SCS, as 'model cities'. These model cities include Rongcheng, Weihai, Suqian, Hangzhou, Wenzhou, and Xiamen.⁸² These 'model cities' were chosen as such to shape the structure of the national SCS mainly based on exceptional performance deemed by the CCP. These cities were amongst the ones that had established blacklists and redlists, created a platform to share credit information, and had agreed to share data with the national government or with other provincial SCS.

One caveat in the legislation implemented by local SCSs is that their punishment systems relied on pre-existing laws for legal regulation. This is unlike the national SCS which aims to both enforce existing laws while also encouraging citizens to act in accordance with what the government deems a loyal and 'model' citizen. Local governments are unable to implement such high-level legislation, which is why they rely on existing laws to enforce their SCSs. Therefore, these local SCSs were instituting a system

⁸² Kostka and Antoine, 5.

that ran parallel to national legislation, where citizens would be punished based on existing laws. These local SCSs therefore reinforce existing legislation, whereas the national SCS aims to create new standards for the model citizen as deemed by the CCP aside from also enforcing a stronger rule of law through the system. Because the rule of law in China has a history of unfair and biased enforcement, these local SCSs have improved the legitimacy of legal enforcement moving away from corrupt practices.⁸³ Nevertheless, the systems are still underdeveloped and are a long way from achieving an unbiased system for legal enforcement.

3.3: State Council Document

In 2014, the State Council outlined the party's vision for the Social Credit System as one with four clear segments: a social trust system, a judicial trust system, a government trust system, and a commercial credit system.⁸⁴ This means that the system will be targeting insincere and untrustworthy behavior from citizens, government officials, legal enforcement, and financial regulation alike. The primary goal of the system is to "curb official corruption, tackle official dereliction and improve efficiency in enforcing court decisions, as well as punish unethical behaviors of professionals such as lawyers, doctors and teachers."⁸⁵ Trust is the central pillar of the system, both trust in the government and in the citizens. The system intends to increase trust in the government by fighting corruption and reducing legislative bias. The system will also build trust in the citizens by encouraging them to maintain the government's trust in their actions and dissuade them

⁸³ Dai, "Enforcing Law and Norms for Good Citizens," 40.

⁸⁴ Song, "The West May Be Wrong About China's Social Credit System," 33.

⁸⁵ Song, 33-34.

from breaking this trust. These goals will be incentivized through a rewards and punishments system, intended to be an extension of the laws currently in place.

The government also intends to implement this system rapidly because of its goal to create a "harmonious Socialist society" furthering the socialist government's agenda.⁸⁶ The end-goal is achieving the 'perfect' Socialist market economy system to promote trust, economic growth, and loyal behavior. This agenda was first put forth by the 18th Party Congress in publishing the "Planning Outline for the Construction of a Social Credit System" with a planning period of 2014 to 2020.

The general goals for the planning system to be fulfilled by 2020 are many, as outlined in this document. Firstly, by 2020 the government intends to have established a standard system held by laws and regulations to define the parameters the government intends to enforce for social credit. The government also intends to have complete credit supervision on the entire Chinese society by this time. Another key goal is ensuring the general population's satisfaction with the system, which will be determined by assessing the pilot programs. Additionally, the government intends to seamlessly connect the social credit monitoring with the rewards and punishment system to apply direct enforcement as a result of citizen, business, or organizational behavior.

The government has also outlined four main principles: (1) Government promotion, joint construction with society, (2) Completing the legal system, standardizing development, (3) Comprehensive planning, graduated implementation, (4) Breakthroughs in focus points, strengthen application.⁸⁷ The first principle focuses on giving the

⁸⁶ State Council, "Planning Outline for the Construction of a Social Credit System (2014-2020)."

⁸⁷ State Council.

government the power to determine the development plans for the system, setting the standards to be upheld by citizens, businesses, and organizations as part of the system, and regularly monitoring the social credit service markets. Meanwhile, the second principle centers around improving the legal system, establishing a clear set of laws and regulations everyone in China must follow. This also includes improving credit information management, standardizing social credit systems to match that of the national SCS, and securing the rights of all subjects involved. The third principle focuses on the long-term planning of the system, ensuring that the system remains strong in the present and is always monitoring the long-term path of the system ensuring that it matches the intentions of the government. This principle also focuses on the gradual implementation of the system, where punishments will grow gradually as citizens become accustomed to operating with this system. Finally, the fourth principle centers on choosing focal regions to model the system (which the government has done by selecting twelve model cities with local pilot programs) to test the implementation of the SCS. This principle also emphasizes the importance of building trust between the several actors involved, establishing clear rewards and punishments mechanisms, and cooperation from all parties involved, including the agencies and businesses contributing data to the government's national SCS.

Additionally, sincerity, especially in regards to commercial affairs, is crucial to developing the CCP's intended trust through the SCS. The government believes sincerity to be key in maintaining commercial relations between businesses and with the government. The State Council outlines in their document that only through sincere commercial relations is sustainable economic growth possible. As a result, the State Council in this

document thoroughly explains how credit will be constructed in diverse areas of businesses, the public sector, and financial markets, in regards to businesses' and citizens' financial activity. These include credit construction in areas such as production, taxation, pricing, government procurement, traffic transportation, e-commerce, advertising, healthcare, employment, education, culture, IP rights, energy and the environment, and many others in an extensive list of industries and market sectors.

Furthermore, the central government is demanding for local governments to collect credit information on their citizens to contribute this information to the national government. With this the government intends to create stronger intergovernmental communication and create credit networks that represent all aspects of citizens' lives. The government also intends for this to facilitate the exchange of information top-down and between businesses for local governments to better regulate legal enforcement as part of the rewards and punishments system.

Finally, the document also includes a very brief section on protecting the rights of the citizens, businesses, and organizations being monitored. The State Council outlines that the system will be administratively supervised to ensure that it consistently protects the rights of these citizens. Legal, economic, and administrative measures are said to be enforced to protect these rights and to provide guidance and information to increase awareness of the system and its measures.

3.4: System of Rewards and Punishments

The Social Credit System is built on both input and output categories.⁸⁸ The inputs include three categories: traditional input, social input, and online input. Traditional input includes income-tax records, loan payments, utility bills, rent records, etc. Social input includes academic integrity, traffic violations records, criminal records, family planning records, volunteer activity, etc. Online input includes shopping habits, online activity, interactions with other internet users, reliability of information posted online, etc. Data from these three input categories affect the output, or the social credit score awarded to each user. This output can have a great effect on the user's lifestyle, including impact on travel options, hotels, insurance premiums, school admissions, mortgage rates, government jobs, and access to social services, just to name a few.

The political roots of the rewards and punishments system in China can be dated back to as early as the Kuan-Tzu's philosophical writings from the Seventh Century BC, as seen in the discussion on the *Sacred Edict* in Chapter 2.⁸⁹ Given a history of this political tactic in China as a part of enforcing social norms, Xi's decision to include this as a means of enforcement in the national SCS is not a novel practice to Chinese citizens.

The essence of the system is to “track everything about everyone at all times” and collect as much data as possible.⁹⁰ This approach has been named the “collect everything” approach to data collection.⁹¹ Although the actual role of each datapoint in this massive dataset has not yet been determined, the government is developing distinct goals for each

⁸⁸ Jiang and Fu, “Chinese Social Media and Big Data,” 381.

⁸⁹ Hsiao and Mote, *History of Chinese Political Thought, Volume 1*, 344.

⁹⁰ Andrejevic and Gates, “Big Data Surveillance: Introduction,” 190.

⁹¹ Liang et al., “Constructing a Data-Driven Society,” 418.

variable tracked while simultaneously aiming to build a powerful and all-encompassing database. With such an array of information on citizens, the government aims for the SCS to focus on *prediction*, rather than prevention, for the system. In the past, systems of surveillance aimed to prevent specific actions that were deemed illegal, disloyal, or generally opposing the party's goals and views. The approach used today by the CCP is to "foresee the future in order to control the present," therefore anticipating individuals' future actions.⁹² Establishing a reward/incentive and punishment/constraint mechanism to influence citizen behavior is the end goal of the planning of the SCS to improve legal enforcement.⁹³

The rewards and punishments system intends to build trust and sincerity across the country. The government intends to reward citizens, businesses, and organizations for trust-keeping behaviors, which will be published via news outlets and general media to channel the benefits of trust-keeping through public opinion.⁹⁴ The CCP also intends to grow supervision and punishment mechanisms to enforce the punishment side of the incentives system. Information regarding trust-breaking practices will also be publicly published for all citizens to witness, with the goal of building transparency and de-incentivizing poor credit-inducing and trust-breaking behaviors. The rewards and punishments are intended to be scrutinized by the public eye to clearly outline what is defined as trust-keeping and trust-breaking behaviors as deemed by the national government.

⁹² Lyon, "Big Dataveillance: Emerging Challenges," 6.

⁹³ Liang et al., "Constructing a Data-Driven Society," 432.

⁹⁴ State Council, "Planning Outline for the Construction of a Social Credit System (2014-2020)."

A national SCS will also likely lead to better economic profits and financial security nationwide. The central government believes that a public credit system would benefit the economy as the government currently does not have data on millions of citizens.⁹⁵ Many Chinese citizens lack a financial credit score because they do not own a credit card, home, or car. While the Chinese Central Bank currently has 800 million citizens' financial data, only 320 million citizens have an existing credit history. This is causing the government to lose 600 billion yuan, per the Chinese Ministry of Trade's data.⁹⁶

Many different actions can result in punishments. For example, citizens can lose points for even the most basic of things such as not crossing the road in the correct place, not visiting one's elderly parents, exceeding the limit of children per family (i.e. two children are currently allowed in most parts of China following the removal of the 1979 One Child Policy).⁹⁷ Some consequences include limitations on travel abroad, access to luxury hotels and restaurants, lower speed internet, obtaining credit, available job positions, or access to private schools for children (this does not apply to public institutions, only private). China has already begun instituting travel bans through its pilot programs and commercial SCSs. As of 2017 the Supreme National Court of China already ruled that 6.15 million citizens are banned from leaving the country within the next four years.⁹⁸ An additional 1.65 million citizens are banned from using the country's railway system for travel.

⁹⁵ Timofeeva, "The Transition to a Digital Society in the People's Republic of China (Development and Implementation of the Social Credit Score System)," 107.

⁹⁶ Timofeeva, 107.

⁹⁷ Timofeeva, 108.

⁹⁸ Timofeeva, 108.

The SCS algorithms are also intended to predict personality traits based on behavior. For example, a citizen who is frequently observed playing video games for hours on end could be labeled as unemployed or idle, costing them points.⁹⁹ Other behaviors that can influence these behavior assumptions include liquor purchases, the titles of purchased books, social media posts.¹⁰⁰ On the other hand, someone who is frequently seen purchasing diapers could be labeled as a caring and attentive parent.¹⁰¹ This is an example of how purchasing behavior can affect algorithmic assumptions of someone's personality. Additionally, unfriending people with low scores on social media will help citizens obtain points, while befriending people with high scores will benefit a citizen's social credit score.

As part of the rewards system, the government is building so-called 'Green Channels' that enable priority for a variety of services, including access to public services, better administrative services, and lower transaction costs.¹⁰² Meanwhile, the punishments will span over social, political, and economic activities conducted by the affected citizens. These punishments will include administrative restrictions in regards to market behavior, particularly applied to businesses. These will also include marketized restrictions, meaning limited access to luxury services and goods and higher lending rates. Finally, these will include socialized restrictions to enforce public supervision, with increased visibility and transparency on both the trust-keeping and trust-breaking that citizens are committing, as well as the kinds of rewards and punishments they are consequently receiving.

⁹⁹ Ramadan, "The Gamification of Trust," 6.

¹⁰⁰ Backer, "China's Social Credit System: Data-Driven Governance for a 'New Era,'" 211.

¹⁰¹ Ramadan, "The Gamification of Trust," 6.

¹⁰² Liang et al., "Constructing a Data-Driven Society," 433.

The Chinese government has already, with the help of Baidu, set up a website that publishes the redlists and blacklists determined by the government. This site currently links data from 37 government agencies and will soon also include data from Sesame Credit.¹⁰³ Figure 3.1 depicts the three kinds of 'blacklists' that are published publicly by the government.¹⁰⁴ These three lists are the blacklist (the first one in Figure 3.1), the Special Attention List (the second one in Figure 3.1), and the Administrative Punishment List (the third one in Figure 3.1). These are ordered descendingly in order of most severe to least.



Figure 3.1: Screenshot of China's Public Blacklist¹⁰⁵

Figure 3.2 represents the top reasons why citizens and companies are put on the blacklist. Most of them are related to violations of fiscal laws or regulations.¹⁰⁶ These are also all tied to existing laws, rather than new social norms that have been constructed to fit under the national SCS. Figure 3.3 depicts the top reasons why citizens and companies are placed on the Administrative Punishment List. These violations are closely related to transportation and road security norms, such as illegal parking or not following traffic sign rules. Furthermore, Figure 3.4 depicts the top reason that companies are placed on the

¹⁰³ Ramadan, "The Gamification of Trust," 6.

¹⁰⁴ Engelmann et al., "Clear Sanctions, Vague Rewards," 72.

¹⁰⁵ Engelmann et al., 72.

¹⁰⁶ Engelmann et al., 72.

Special Attention List. These are mostly related to issues with posting annual reports on time, although some of the other but less common issues also concern financial violations.

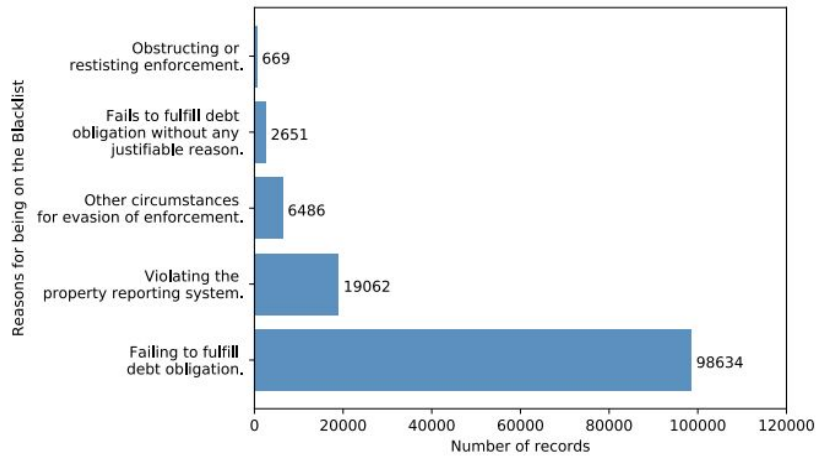


Figure 3.2: Top Reasons to be on the Blacklist¹⁰⁷

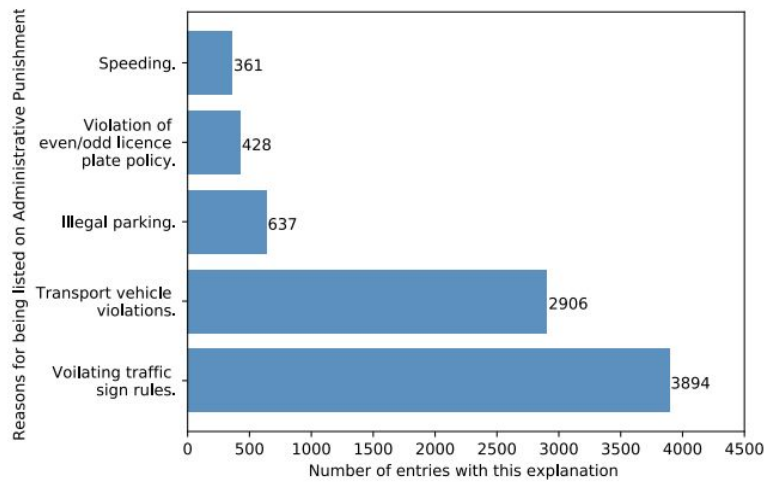


Figure 3.3: Top Reasons to be on the Administrative Punishment List¹⁰⁸

¹⁰⁷ Engelmann et al., 72.

¹⁰⁸ Engelmann et al., 74.

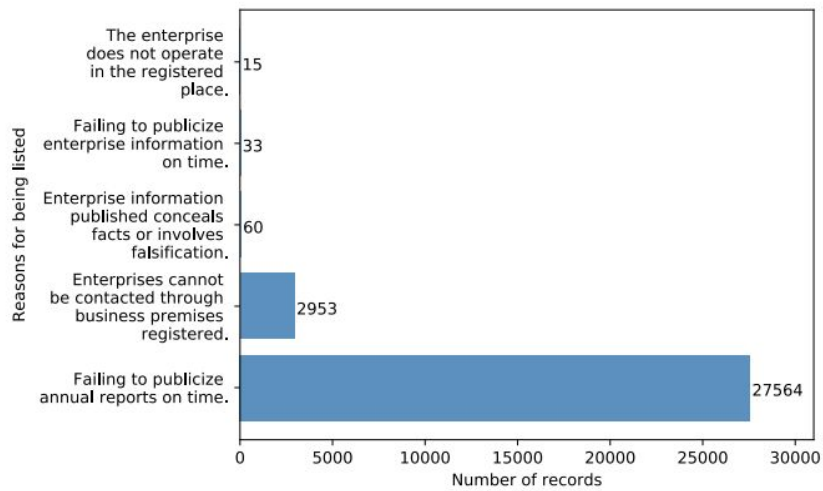


Figure 3.4: Top Reasons to be on the Special Attention List¹⁰⁹

One notable feature of the blacklists is that they provide a “Disagreement/Correction (异议/纠错)” function where citizens can dispute a blacklist decision.¹¹⁰ Citizens are given up to 2000 characters to argue their case. The Credit China site also posts reports on citizens with bad behavior, under “Typical Cases (典型案例).” Foucault claims that blacklists and forms of rewards and punishments impose discipline, rather than law, which is effective in maintaining order by discouraging citizens from engaging in what is forbidden and it helps correct citizens' behavior with less severe crimes.¹¹¹ By punishing behaviors that are unfavorable and reward those that are favorable, discipline creates social norms that citizens can comply with.¹¹²

While there are three kinds of negative lists, there is one 'positive list,' the Redlist. Like with the Blacklists, the Redlists publish information on citizens' names, IDs, and label

¹⁰⁹ Engelmann et al., 74.

¹¹⁰ Engelmann et al., 75.

¹¹¹ Foucault, *Security, Territory, Population*, 46; Hansen and Weiskopf, “From Universalizing Transparency to the Interplay of Transparency Matrices,” 7.

¹¹² Foucault, *Security, Territory, Population*, 57.

them with positive attributes related to their behavior.¹¹³ Some citizens' entries also showed the number of volunteer hours they had performed. Many citizens' entries also showed honorary titles, but very few to none showed any justification for why these were given. The Redlist also publishes news stories on good citizens known as “Stories of Integrity (诚信人物/故事)” that are posted under the Credit China “Integrity Culture (诚信文化)” section.¹¹⁴

3.5: Commercial SCSs

Although this will be discussed in depth in the next chapter, it is important to note that the central government has allowed several companies to operate their own social credit systems in line with government regulations. The government has established mutually beneficial partnerships with these businesses, where the government allows for their credit systems to operate if they in return provide the government with the data they collect. Eight businesses were selected as the only ones who could operate their own financial credit systems, which include Alibaba's Sesame Credit and Tencent's TenPay. The key difference between businesses' financial credit systems and SCS's operated by local governments is that those run by businesses are opt-in, where participation is voluntary.

It is especially important for the government to rely on businesses because traditionally businesses have been the ones instigating innovation, rather than the governments themselves.¹¹⁵ These companies have been supplying the government with new surveillance products, including facial recognition-enabled devices, to support

¹¹³ Engelmann et al., “Clear Sanctions, Vague Rewards,” 75.

¹¹⁴ Engelmann et al., 75.

¹¹⁵ Liang et al., “Constructing a Data-Driven Society,” 418.

government demands. These companies, as some of the top companies in China, can provide the government with data on almost every citizen in the country through some form or another of their online activity data. Therefore, it is in the government's interest to work closely with these companies to develop the national SCS.

3.6: Three Phase Framework Approach

Liang et al (2018) offer a strong framework for understanding the structure of the Social Credit System. They provide a three-phase framework including data collection, data aggregation, and data infrastructure.¹¹⁶ Data collection involves merging data both financial and non-financial via both government-established and private databases. Data aggregation involves integrating the data collected through a variety of platforms into one central infrastructure. Finally, data infrastructure involves the utilization of the information aggregated in the previous phase to score Chinese citizens, businesses, and government organizations. The former two are much of a black box, where little is known about what data is collected and the process that is undergone to merge it.¹¹⁷

¹¹⁶ Liang et al., 416.

¹¹⁷ Jiang and Fu, "Chinese Social Media and Big Data," 381.

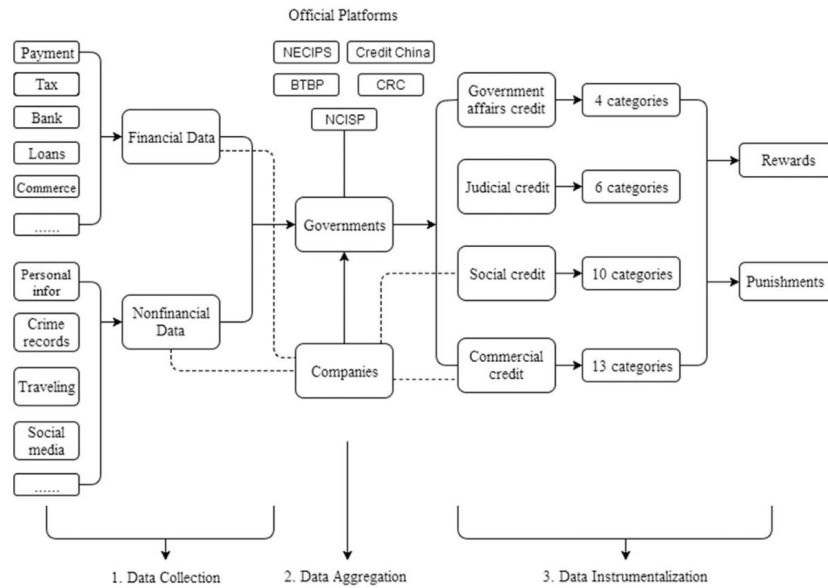


Figure 3.5: Organizational and Process Chart¹¹⁸

3.6.1: Data Collection Phase

The central government has constructed several platforms to collect, store, and organize data on the entire population, whether citizens, businesses, or government organizations.¹¹⁹ The National Development and Reform Commission (NDRC) has played a crucial role in developing national data platforms, in particular creating the largest platform the National Credit Information Sharing Platform (NCISP) since 2015. The NCISP aggregates data from forty-two central agencies, thirty-two local governments, and fifty market actors. Some businesses that have their data platforms such as Alibaba and Baidu share their data with NCISP. By December 2018, over 10.7 billion data points around individuals, government affairs, and commerce had been collected and aggregated in the government’s social credit platform.

¹¹⁸ Liang et al., “Constructing a Data-Driven Society,” 426.

¹¹⁹ Liang et al., 426.

The NCISP currently has over 400 datasets combined from data provided by central agencies and local governments. These datasets include both public and private data. Of these 400 datasets, two-thirds (n=261) provide information on businesses and commerce, a fifth (n=74) provide data on individuals. Other datasets include information on social organizations (n=32) and government affairs (n=33). Given that most of these datasets provide information on businesses and commerce, it is clear that the focus of the SCS at this time is on the commercial and financial sectors, rather than on ‘big brother’ surveillance of citizens (although that still plays a significant role). The NCISP monitors commercial businesses, individual citizens, social organizations, and government agencies using at least 537 variables, of which over half (295) are specifically used for commerce and businesses. Table 3.1 includes a list of government agencies that contribute data to the NCISP’s data-collection platform.

Agency	# of Datasets
NDRC	73 (68 commercial, 5 citizen focused)
Ministry of Industry and Information Technology	34
Ministry of Agriculture	28
National Health and Family Planning Commission	27
Ministry of Transport	24
Ministry of Housing and Urban-Rural Development	24
Ministry of Culture	3
Cyberspace Administration	2
Securities Regulatory Commission	2
State Administration for Industry and Commerce	1

Table 3.1: List of some of the agencies that contribute datasets to the NCISP’s big data platform.¹²⁰

¹²⁰ Liang et al., 427.

Of the 400 datasets in the NCISP's platform, 384 are categorized as one of three types: public sharing, limited sharing, and intergovernmental sharing.¹²¹ Three-quarters of the datasets (n=284) are public, which means that anyone can access this data. About a fifth of the datasets (n=70) are for limited sharing, although it is largely unclear who can share these datasets. These limited sharing datasets mostly include information on punishments-related information, such as insurance fraud. Finally, thirty (n=30) datasets are only for intergovernmental sharing, which include variables such as student credit and administrative penalties.

3.6.2: Data Aggregation Phase

Although the actual process of how data is centralized is very unclear and somewhat of a blackbox, the data aggregation phase consists of combining financial and nonfinancial data collected by a multitude of government and business agencies.¹²² The CCP is currently building at least five centrally-managed platforms to store and analyze data. These platforms include NCISP, CreditChina, Credit Reference Center, National Enterprise Credit Information Publicity System (NECIPS), and the List of Dishonest Persons Subject to Enforcement. Although these all exist as independent platforms, they are mandated to exchange data by the central government.

Over fifty agencies are collaborating to build the SCS and are mandated to share data to build the central platform.¹²³ The NDRC and the People's Bank of China (PBC) are the two

¹²¹ Liang et al., 428.

¹²² Liang et al., 429.

¹²³ Liang et al., 429.

primary actors in the SCS. The NDRC works with thirty-nine central agencies and works primarily with the PBC, Ministry of Finance, Cyberspace Administration, and the Ministry of Commerce. Although the NDRC has 154 data collection and sharing missions, its primary mission is to collect data on the commercial and social sectors. The PBC has forty-one partners and 136 missions. These missions include building financial credit investigation systems, local information systems, and composing credit scores for citizens and businesses. Few agencies within the PBC focus on political control.

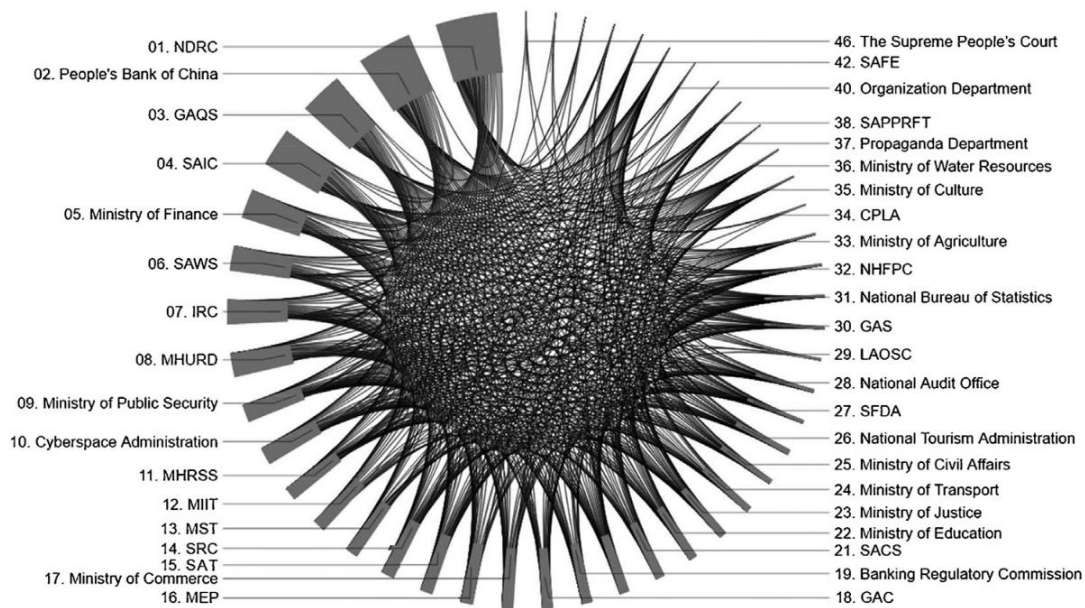


Figure 3.6: Government Agencies Involved in the Establishment of China's SCS¹²⁴

Figure 3.6 depicts the agencies that play a role in developing the SCS infrastructure. Each node in the diagram is a government department. The lines between the nodes represent the collaborative relationships between the agents working together. The agents

¹²⁴ Liang et al., 430.

with higher density nodes indicate a combination of the most central agencies and data collection and sharing missions related to them.

In efforts towards achieving the CCP's goal of collecting data on everything, data sharing, integration, and analytics are crucial in developing a strong data platform for the SCS.¹²⁵

3.6.3: Data Analytics Phase

This phase has not yet been executed, as the SCS is set to officially begin functioning in 2020.¹²⁶ The phase is the most important one of the three, as it determines the utility of the system. It focuses on assigning credit scores to the Chinese citizens, businesses, and government agencies to then build a reward and punishments system. These rewards and punishments will be informing policy decisions in four areas: government affairs, judicial affairs, social activities, and commercial activities.¹²⁷

The system uses three steps to determine whether a subject, meaning either a person, firm, government agency, or organization, is on a red list (being rewarded) or on a blacklist (being punished).¹²⁸ The local governments are tasked with determining who goes on what list, while news agencies, public media firms, and businesses are tasked with disseminating information on the specifics of the rewards and punishments. In the second phase, the NCISP aggregates three types of data to influence whether citizens fall into the red lists or blacklists. These include basic information, including names, ID numbers, etc.;

¹²⁵ Liang et al., 430.

¹²⁶ Liang et al., 431.

¹²⁷ Liang et al., 431.

¹²⁸ Liang et al., "Constructing a Data-Driven Society," 432.

reasons as to how citizens keep or break trust in the eyes of the government; and the mechanisms for joint rewards and punishments.

As part of the rewards system, the government is building 'Green Channels' as discussed earlier in the chapter that provides priority access to a variety of services, including access to public services, better administrative services, and lower transaction costs.¹²⁹ In contrast, citizens, businesses, and organizations on the blacklist will suffer punishments in regards to social, political, and economic activities.

Information on how the data is being analyzed and how it will be used to inform the rewards and punishments system is still very limited as the government has not yet announced the specifics of this part of the SCS. More information on this is likely to be announced in the coming months when the final details of the system will be published as the planning years of the SCS come to a close.

3.8: Conclusion

Ultimately, big data and the mass surveillance that the government conducts online in China has enabled for such a system as the SCS to be able to exist at a national scale. While the central government's main goal in creating this system is to enable more reliable mechanisms of trust, the SCS is also founded on improving the rule of law in China to reduce corruption and eliminate biases. Mass surveillance on a national scale aims to reduce this level of corruption and promote sincerity amongst citizens, businesses, and organizations alike.

¹²⁹ Liang et al., 433.

The government is utilizing local government SCSs, as well as business-operated SCSs, to inform the structure and goals of the national SCS. While the forty-three local SCSs demand for mandatory participation from all citizens, the business-run SCSs are opt-in yet provide much more extensive information on the participants. All of these actors are contributing data to the government to inform the variables and databases the central government is collecting to structure the general system.

Liang et al.'s Three Phase Framework very clearly explains the process the government is undergoing to aggregate existing and future data and create a rewards and punishments system to enforce the SCS, which is still a work in progress. However, most of the processes in how the government is constructing the national SCS still remain in the dark, and very few journal articles have been published on the subject.

Chapter 4: The Symbiotic Relationship between the Government and Businesses

E-payment platforms are currently the most popular form of making payments in China. In 2019, around 577.4 million Chinese customers use mobile payment apps and about ninety percent of payments in China are e-payments.¹³⁰ Based on predictions, almost eighty percent of smartphone users in China will use e-payments for all types of payments by 2021. As a result, companies that manage e-payment platforms are able to collect extensive data on their users. Since the government has been struggling to collect financial data on their citizens to aggregate in their national SCS, the central government has partnered with many companies that have their own commercial social credit systems. These companies provide the government with data on their users, while the government in return provides them with an operating license. This cooperation has created a symbiotic relationship between the two actors, where they provide each other with many benefits by working together to build the national SCS.

The government allowed eight companies to operate their own commercial SCSs, which include Alibaba and Tencent, two of China's largest companies. Alibaba and Tencent both have their own e-payment platforms, AliPay and WeChat Pay (or TenPay) respectively. Both companies have also partnered with a variety of third parties to connect their products and services through Alibaba and Tencent's e-payment systems. For example, Alibaba operates Didi Chuxing, the popular Chinese rideshare service which is linked to Alipay. As a result, these companies collect large amounts of data about their users, even if the data is not analyzed through a social credit scoring system. WeChat Pay

¹³⁰ Kats, "The Mobile Payments Series: China"; Xiao, "China's Electronic Payments Continue Steady Growth."

has over 1.08 billion monthly active users and AliPay has over 900 million monthly active users in 2019.¹³¹ Compared to Apple Pay's 127 million monthly active users, these companies are able to have a much more widespread impact through e-payments.

Users of these e-payment platforms are eligible to opt-in to social credit scoring systems that provide users with scores based on their financial behaviors. These scores update on a monthly basis. Unlike government-run SCSs, these SCSs provide only benefits to users without any punishments. The benefits are similar to other loyalty programs where companies reward customers with discounts or special promotions based on their spending activity. These commercial SCSs are providing data to the central government as a pilot to tell them what works and what doesn't work when implementing national SCS.

This section will first provide a background on commercial SCSs in China and their structures, followed by a detailed analysis of Ant Financial's Sesame Credit as a case study. The section will then provide an analysis of the similarities and differences between commercial and government-run SCSs.

4.1: Background on Commercial SCSs

Only eight companies across China are allowed to create financial credit systems that use algorithms to rate users. These companies share a government license that allows them to operate, meeting the condition of sharing the data they collect with the national government. Amongst these eight are China Rapid Finance, run by Tencent (the developer of WeChat) which has over 850 million users, and Sesame Credit, run by Ant Financial

¹³¹ DaXue Consulting, "Payment Methods in China: How China Became a Mobile-First Nation."

owned by Alibaba, the Chinese e-commerce giant.¹³² Ant Financial, which leads Alibaba's financial branch, also runs AliPay, the popularly-used mobile payment platform. Sesame Credit is the most popular commercial SCS used in China because more than half of the Chinese population using commercial SCS are users.¹³³ About a third use Tencent Credit, and about a fifth use both systems. Table 4.1 shows the eight commercial SCSs the government has partnered with and provided with licenses to operate. The table includes the years in which the central government began working with these companies, as well as the active users on each platform in 2018.

Year	Stakeholder	Platform	Estimated Volume in 2018
2005	Shenzhen government	Pengyuan 800 Credit	400 million individuals + firms
2005	China Chengxin	Wangxiang Fen	300 million individuals + firms
2013	China Intelli Credit	Intelli Credit	70 million individuals
2013	Sinoway	Zhuzhu Fen	Potential 920 million individuals
2014	Ant Financial (Alibaba)	Sesame Credit	520 million individuals
2015	Lakala and Lenovo	Kaola Credit	80 million individuals + firms
2015	Ping An	Qianhai Haoxindu	300 million individuals + firms
2017	Tencent	Tencent Credit	820 million individuals

Table 4.1: List of China's Private Commercial Social Credit Platforms Ordered by Year in which They Began Partnering with the National Government¹³⁴

Tencent and Alibaba's mobile payment platforms also connect to other companies' services, such as Didi Chuxing, China's largest ride-sharing/taxi service, or Baihe, China's

¹³² Jiang and Fu, "Chinese Social Media and Big Data," 385.

¹³³ Kostka and Antoine, "Fostering Model Citizenship," 15.

¹³⁴ Liang et al., "Constructing a Data-Driven Society," 423.

largest online dating service. Because of their connections with other companies and their products and services, companies like Tencent and Alibaba are able to obtain extremely varied and comprehensive datasets on their users. Alibaba and Tencent, along with Baidu, China's largest search engine, have data on most internet users in China and control almost all of the country's online activities, especially if we consider the extensive partnerships these companies hold with other popular companies.¹³⁵

Tencent's scoring system goes through the company's QQ chat application. Users are rating on a score scale between 350 and 950 which is calculated based on five categories: "material condition (income, credit history of the citizen, payment of bills (electricity, telephone, etc.)), security (personal data, confirmation of personal information), social connections (education, friends), law-abiding (diligence, positive feedback about the government, the ability of the user to fulfill obligations under the contract), and consumer behavior (purchases, preferences of goods and services)."¹³⁶

Kostka and Antoine (2019) compare commercial SCSs to 'loyalty schemes' that many private technology companies use to rate their customers' financial creditworthiness while simultaneously promoting the use of their own platforms and products.¹³⁷ Customers find it beneficial to join loyalty schemes or provide companies with greater control over their personal data if the customers feel that they are getting something valuable in return. Hence, understanding your user is important, as companies need to understand what kinds of benefits users will find desirable enough to join these loyalty schemes and offer their

¹³⁵ Jiang and Fu, "Chinese Social Media and Big Data," 385.

¹³⁶ Timofeeva, "The Transition to a Digital Society in the People's Republic of China (Development and Implementation of the Social Credit Score System)," 106.

¹³⁷ Kostka and Antoine, "Fostering Model Citizenship," 6.

personal data. For example, users of Alipay are eligible for discounts and special promotions for certain services or products as a result of frequent app usage.

4.2: Understanding Commercial SCSs: Sesame Credit

In China, the most popular and advanced commercial SCS is Zhima Credit (芝麻信用 Zhima Xinyong) or Sesame Credit in English. Ant Financial Services Group, owned by Alibaba, the Chinese e-commerce giant, developed this SCS platform. Instead of using red lists and blacklists to evaluate its users, Sesame Credit uses one numeric score to value users' financial credit. This score ranges from 350 to 950 points.¹³⁸ The scores are updated once a month and are visible on the AliPay app, Alibaba's mobile payments app. Although Ant Financial provides very limited information on how the data feeds the algorithm, they do outline the criteria they use to evaluate users. These are five: a user's credit history, their behavior (such as buying behaviors, donations to charities, etc.), debts and assets information (i.e., their ability to pay off debts and whether their assets are stable), the user's personal information, and their social relationships (such as the characteristics of their social network).¹³⁹ However, because the algorithm that weights each of these criteria is not known or understood, users find it difficult to understand which behaviors strengthen or weaken their social credit. Kostka and Antoine (2019) note that it is difficult to achieve the social manipulation the government aims to achieve through the national SCS if users are not scored transparently.¹⁴⁰ If users do not understand what actions can affect a bad social credit score, this could be a potential limitation of the national SCS.

¹³⁸ Kostka and Antoine, 5.

¹³⁹ Kostka and Antoine, 6.

¹⁴⁰ Kostka and Antoine, 6.

Sesame Credit collects data from AliPay, Alibaba's e-payments platform. AliPay was the first e-payment platform launched in China in 2004 and as of 2019 represents an approximate fifty-four percent of the market share.¹⁴¹ Although businesses do need to pay fees, neither Alipay nor WeChat Pay charge users for transaction fees for making payments through their apps. Users can use these apps to pay by scanning the merchant's QR code, or scanning their QR code when making payments through services such as public transportation. Some companies have even begun to use facial recognition for payments, for example, how Alipay partnered with the Shanghai Metro to scan payments through facial recognition cameras.¹⁴² This platform connects a variety of Alibaba product and service offerings with additional third party products and services. Users can access third party apps such as ride sharing, food ordering, public transportation, and banking services without having to leave the e-payments app, as all of the products and services are connected for seamless use. Using AliPay for payments grants users with special discounts and promotions for spending, as part of a 'loyalty program' of sorts. Alibaba collects data on the users and their financial activity throughout all of these different functions and uses them to generate social credit scores through Sesame Credit. Through the app, users can use a myriad of financial functions including the following, as listed on AliPay's App Store Description¹⁴³:

1. Send/receive money from your peers
2. Transfer money to friends or split the bill at your favorite restaurant
3. Card free payment at millions of merchants

¹⁴¹ "All You Need to Know About Chinese Mobile Payment Systems."

¹⁴² Gong, "Mobile Payments in China: No Wallet, Bring Your Smartphone."

¹⁴³ Gong.

4. Top up your mobile phone and pay your utility bills
5. Place and track orders in Taobao and TMall
6. Order food from local restaurants or book a taxi
7. Manage your money with wealth management products
8. Free off-site cross-bank transfer / credit card repayment and loans
9. Scan & Pay - Scan & use the QR code to pay at your local stores
10. Book Air/Rail/Movie Tickets, at ease
11. Enjoy hundreds of discounts and promotions from various merchants
12. Group account facility to manage expenses within family and friends circle
13. Donate/Participate in walkathons along with your friends

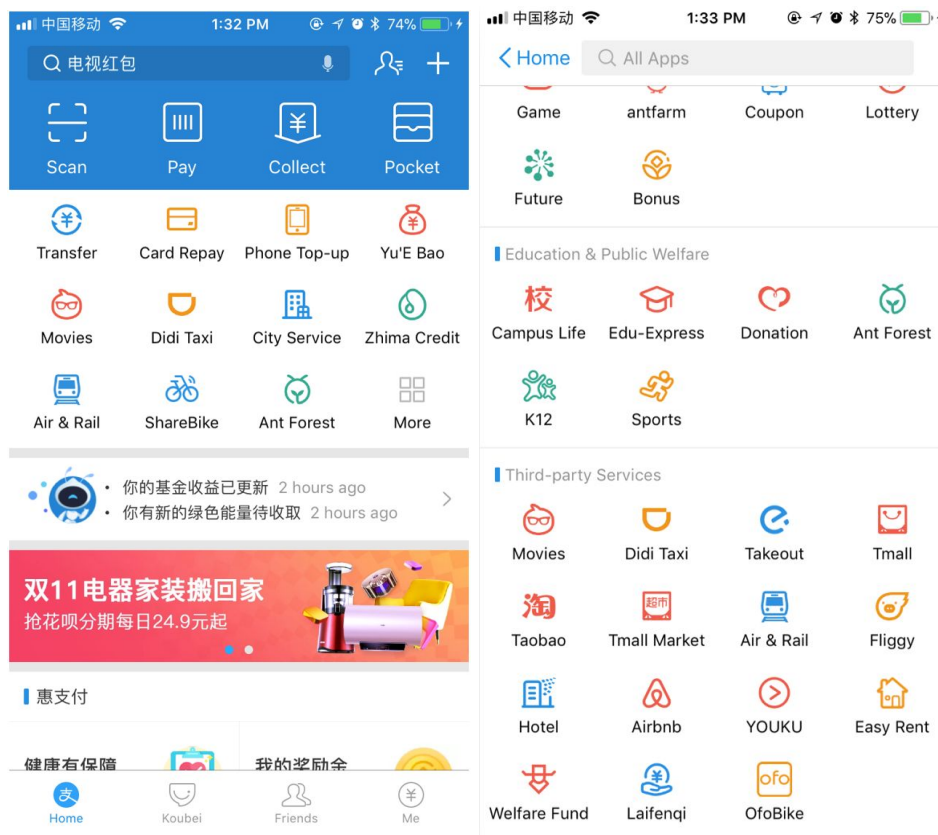


Figure 4.1: Screenshots taken of the Alipay App and Its Offerings¹⁴⁴

¹⁴⁴ Gong, "Mobile Payments in China: No Wallet, Bring Your Smartphone."

Figure 4.1 also shows how the app displays these different functions and the different kinds of apps, like AirBnB, that are available through the app. As shown on the left, users can easily access their Zhima (Sesame) Credit through the app, as well as access a number of different services. Because of the breadth of data Alibaba is able to collect as a result, their credit scoring system is very comprehensive and attractive for government use.

Sesame Credit, while it cannot provide preferential treatment for government services in the same way government-run SCSs do, has partnered with third-party actors to increase the kinds of benefits they provide to include some public sector benefits.¹⁴⁵ Although, currently less than twenty percent of the data used for the national SCS to access personal information comes from Alibaba alone, where over eighty percent of the data collected comes from many other sources, including government databases.¹⁴⁶ This also shows the breadth of data the central government is looking to collect, which is not exclusively financial data.

Sesame Credit offers diverse benefits depending on a user's score. At 600 points, a user can obtain a \$800 unsecured loan that can be used towards online purchases.¹⁴⁷ A user at 650 can rent a car without collateral, can obtain preferential check-in at specific hotels and priority registration at Beijing International Airport. Users with a rating higher than 666 can borrow 50,000 yuan from Ant Financial Services. At 700 points, users can obtain expedited travel permits to Singapore without the need for permission documents, such as

¹⁴⁵ Kostka and Antoine, "Fostering Model Citizenship," 6.

¹⁴⁶ Kostka and Antoine, 5.

¹⁴⁷ Timofeeva, 106.

employer invitations, to enter the country. At 750 points users can get expedited Schengen visas. Alibaba is not directly issuing these visas. Instead, travel and visa companies consider Sesame Credit scores when offering these benefits to citizens because they pass a certain threshold of points.

Timofeeva (2020) argues that, by scoring individuals, an SCS rating determines "the value of an individual as a citizen of the county," as this score will affect their ability to obtain specific jobs, mortgages, private school admissions for their children.¹⁴⁸ This score could even affect a user's chance to go on dates or get married, as the commercial SCS connects to dating apps such as Dating Baihe whose algorithm publicizes profiles with higher scores more.

Sesame Credit users have also expressed a variety of concerns with how the platform operates. First, users were concerned with how the platform links financial information with social media data, particularly in regards to information about users' friends. Because platforms like WeChat Pay connect to social media accounts like WeChat, users' information can connect to their online social activity and compare their activity to that of their friends and other users they frequently interact with. Many users also express concerns with not understanding how their personal data is being manipulated to create the social credit scores the platform generates. This devalues the system as an incentive to improve users' financial behavior, as they are unsure as to what activities affect their credit score.

¹⁴⁸ Timofeeva, "The Transition to a Digital Society in the People's Republic of China (Development and Implementation of the Social Credit Score System)," 106.

4.4: The Similarities and Difference between Commercial and Government SCSs

Many similarities and differences exist between commercial and government-run SCSs. Both types of systems use social and financial information about users to evaluate their social credit. However, each does so in very different ways. Government-run SCSs employ rewards and punishment systems to encourage maintaining trust and prevent acts that undermine trust. These rewards and punishments apply to individuals, businesses, and other types of organizations. The rewards can include more affordable healthcare services, easier access to public services, tax reductions, cheaper public transportation, lower loan rates, and many others.¹⁴⁹ Punishments can include employment bans in the public sector, limited access to transportation and travel services (including trains and airplanes, in addition to public transportation), eligibility for government welfare or benefits, limited access to financial services, and public shaming through published blacklists, amongst many others.¹⁵⁰ Currently, without a national rewards and punishments system in place, local pilot programs vary in the specifics of the rewards and punishments they provide. These local governments have also relied heavily on material benefits as incentives for higher approval by its citizens, which is something the central government plans to pursue as well. However, commercial SCSs do not use a rewards and punishments system and do not show any direct adverse consequences from a bad social credit score. Commercial SCSs provide several benefits for users, including easier access to sharing economy services (e.g., ride-sharing, bike and car rentals, etc.), fast-tracked visa

¹⁴⁹ Kostka and Antoine, "Fostering Model Citizenship," 6.

¹⁵⁰ Kostka and Antoine, 6.

applications, qualification for personal credit loans, deposit-free check-ins for hotels, priority at hospitals, and many others.¹⁵¹

Another difference between the two types of systems is that government SCSs require mandatory participation of all citizens in the region, while commercial SCSs are opt-in. These opt-in SCSs provide benefits to the users who opt to use them, as discussed above. They are also linked to the epayments platforms they stem from, which makes it easy to transfer and use information. At the same time, government-run SCSs require mandatory participation by all citizens. These local SCSs focus on legally enforceable behaviors, meaning that they serve as an extension to the existing legal framework. Therefore, citizens' participation is mandatory because everyone in each of the pilot regions is already subject to legal punishment if they perform trust-breaking acts.

Additionally, commercial and government-run systems differ in the demographics represented by their users. In their current state, government-run SCSs are local or regional, meaning that they only target the population of the region they represent. Unlike the pilot program, the national SCS will target all Chinese citizens. On the other hand, commercial SCSs are voluntary, and the citizens these companies collect data on are only the ones that use their products or services. While this could limit the scope of their impact, Tencent has over 850 million users.¹⁵² Hence, Tencent's user base is much larger and more diverse than most if not all of the pilot programs. However, it is important to note the different data points each of the government-run vs. commercial SCSs are able to collect, as

¹⁵¹ Kostka and Antoine, "Fostering Model Citizenship," 6.

¹⁵² Jiang and Fu, "Chinese Social Media and Big Data," 385.

commercial SCSs focus on the activity done on their platforms, while government-run SCSs focus on legally-enforceable variables.

4.5: Conclusion

Commercial SCSs have had a significant impact on national SCS, which is still in its planning stages. These commercial SCSs both provide data to the government on their users, as well as inform the structure the national SCS might take. In return for the data the commercial SCSs provide, the government allows eight companies to operate their own SCSs, providing them with proper operating licenses. This mutually beneficial partnership has created a strong symbiotic relationship between the central government and private companies.

Although both commercial and government-run systems can act as financial credit systems, they differ in many ways. This includes their scoring systems, where government-run SCSs have developed rewards and punishment systems to influence citizens' behavior. Commercial SCSs, on the other hand, do not have any direct punishment scheme, but instead offer various benefits on several different scales based on the numerical score awarded to each user.

Because of the extensive reach the commercial SCSs have in terms of their diverse user base and the wide range of data these companies are able to collect, the government benefits greatly from the social and financial data it is able to obtain from working with these companies. Once the national SCS is launched, the central government has not

indicated any intention to shut down commercial SCSs and will still rely on this symbiotic relationship.

Chapter 5: Explaining High Approval Rates

Thus far, the Chinese Social Credit System and other existing social credit systems in China have seen a very positive response from citizens across the country.¹⁵³ Existing systems have also already been very effective in affecting behavioral change in users.¹⁵⁴ Western, specifically American, literature has covered Chinese social credit systems in a very negative light, highlighting possible privacy breaches and violations of basic human rights.¹⁵⁵ However, several explanations exist as to why Chinese citizens are favoring this kind of system. Many political, historical, and psychological reasons exist as to why this might be the case.

This chapter will first assess the high approval rates and positive behavioral changes resulting thus far from social credit systems, both government-run and commercial, and will then assess three explanations for these high approval rates and why these are shocking to Westerners. First, I will address misconceptions that exist in the West, specifically in the US, on privacy and the cultural context in China that could explain the high approval. Then I will provide a political explanation, a historical explanation, and finally a psychological explanation to examine the high approval rates.

5.1: Approval Rates and Behavior Changes

Very limited research currently exists on perceptions on both existing social credit systems and the national system still under construction in China. Genia Kostka is the only

¹⁵³ Kostka, "China's Social Credit Systems and Public Opinion."

¹⁵⁴ Kostka and Antoine, "Fostering Model Citizenship."

¹⁵⁵ Palin, "China's 'Social Credit' System Is a Real-Life 'Black Mirror' Nightmare"; Marr, "Chinese Social Credit Score: Utopian Big Data Bliss Or Black Mirror On Steroids?"

scholar to date that has conducted studies to understand how the Social Credit Systems in China are being perceived. She conducted a national survey in 2018 and found that thus far the national SCS has received popular public support, and also found that the individual social credit systems have also received significant support. Thus far, forty-nine percent of the population she surveyed reported they "strongly approve" of the national social credit system project, and thirty-one percent said they "somewhat approve."¹⁵⁶ Two of her publications, "China's Social Credit Systems and Public Opinion: Explaining High Levels of Approval" and "Fostering Model Citizenship: Behavioral Responses to China's Emerging Social Credit Systems" written with Lukas Antoine, are repeatedly cited for their pioneering research on approval rates in China of existing social credit systems and of the government's national SCS. The former analyzes overall approval rates for existing social credit systems in China, while the latter focuses on behavioral changes resulting from the social credit systems. This section will examine the results in both of these papers. Both these papers examine existing social credit systems, including the pilots run by local governments and the SCSs run by private businesses. These results are used as predictive indicators of what public perception and behavioral changes as a result of the national SCS might be.

5.1.1: High Approval Rates

For her analysis in "China's Social Credit Systems and Public Opinion: Explaining High Levels of Approval," Kostka conducted an online survey between February and April

¹⁵⁶ Jiang and Fu, "Chinese Social Media and Big Data," 382.

2018 with 2,209 respondents.¹⁵⁷ The participants varied in age, gender, and the region in China where they lived, and the respondents came from varied parts of China (the results were weighted based on the demographics). This research aimed to understand how citizens were perceiving social credit systems and. To understand what influences this sentiment and perception, Figure 5.1 depicts the three categories Kostka identified as potential factors that influence citizens' opinions towards social credit systems. Individual characteristics and beliefs, the first category, are broken down into three sub-categories: socio-demographic factors, online habits, and political attitude and beliefs. The second category breaks down characteristics of social credit systems, which include sub-categories such as magnitude of score, which includes both the score citizens receive as well as how theirs compares to those of their friends and family, the transparency in score calculation and information about the social credit systems, and others. The third category Kostka identifies is functions of social credit systems, which encompasses information on the advantages and disadvantages citizens would receive and the varying perceived functions of social credit systems.

¹⁵⁷ Kostka, "China's Social Credit Systems and Public Opinion," 2.

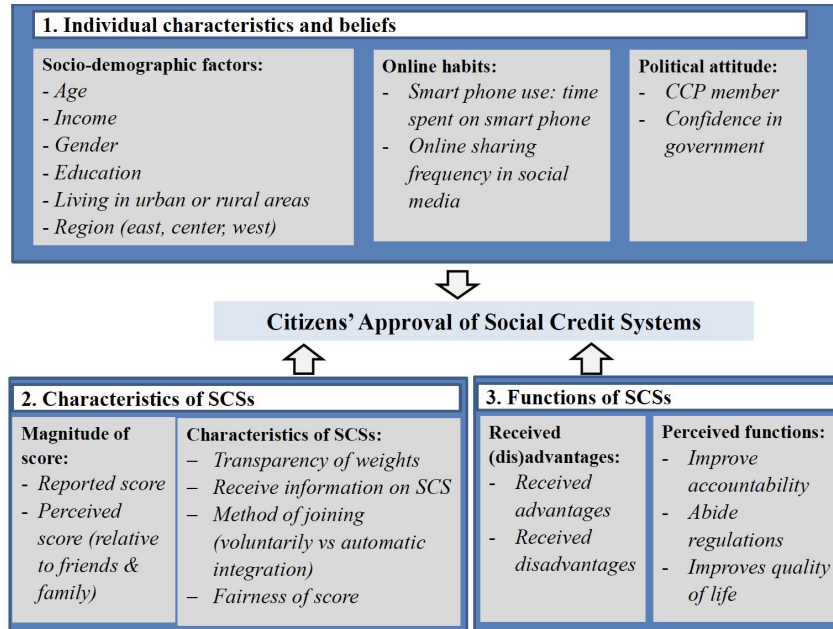


Figure 5.1: Conceptual Framework for Approval Rates of Social Credit Systems¹⁵⁸

From the survey as seen in Figure 5.2, eighty percent of respondents are using at least one commercial social credit system.¹⁵⁹ Citizens can take part in multiple commercial pilot systems, as well as in government pilots locally in addition to the commercial SCSs. forty-three percent of the respondents reported living in one of the 42 localities where locally-run social credit systems were in place, and of these only eleven percent actually knew that they were taking part of the local pilot system. As a result, Kostka suggests that local pilot programs are not as advanced as they are portrayed to be.

¹⁵⁸ Kostka, 6.

¹⁵⁹ Kostka, 11.

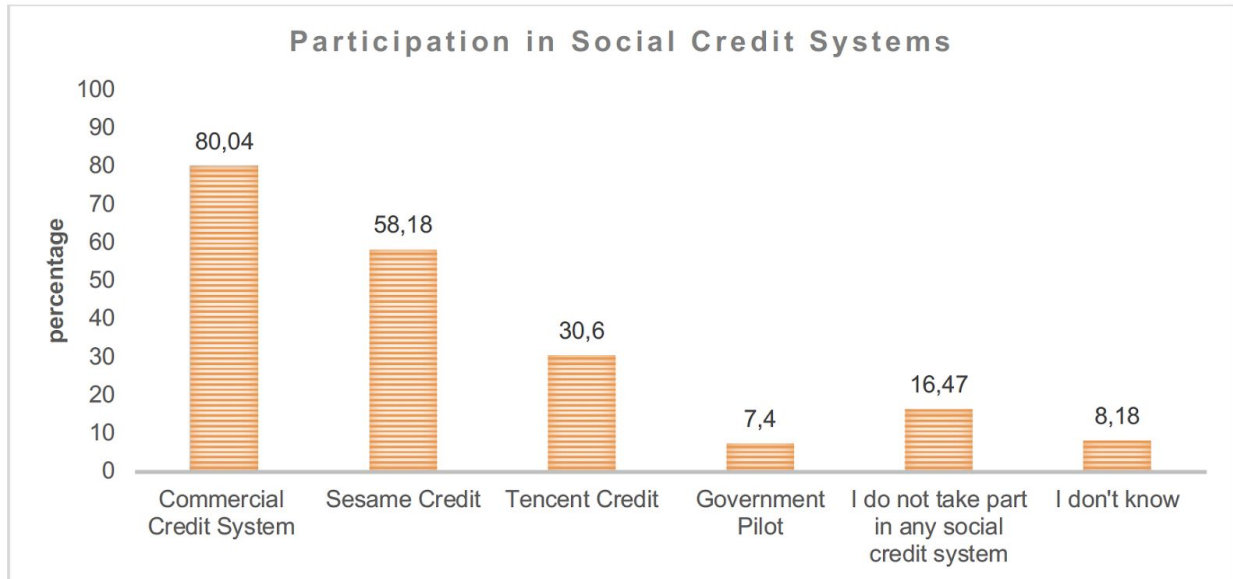


Figure 5.2: Percentage of Participation in Existing Social Credit Systems in China (weighted, N=2209)¹⁶⁰

Given these statistics, the respondents also reported a very high level of approval of these social credit systems. Eighty percent of respondents reported to strongly approve or somewhat approve of social credit systems overall.¹⁶¹ These numbers are shown below in Figure 5.3. Only one percent of participants reported that they strongly or somewhat disapprove of the social credit systems. However, Kostka does establish a strong limitation in her research in that, given that China is an authoritarian regime, citizens might fear responding honestly to a survey where they would express disapproval. However, to lessen the influence of this limitation, Kostka did clearly inform participants that the data was anonymized (although she cites experienced researchers in China that claim that respondents do not falsify their preferences as a result of this).

¹⁶⁰ Kostka, 11.

¹⁶¹ Kostka, 11.

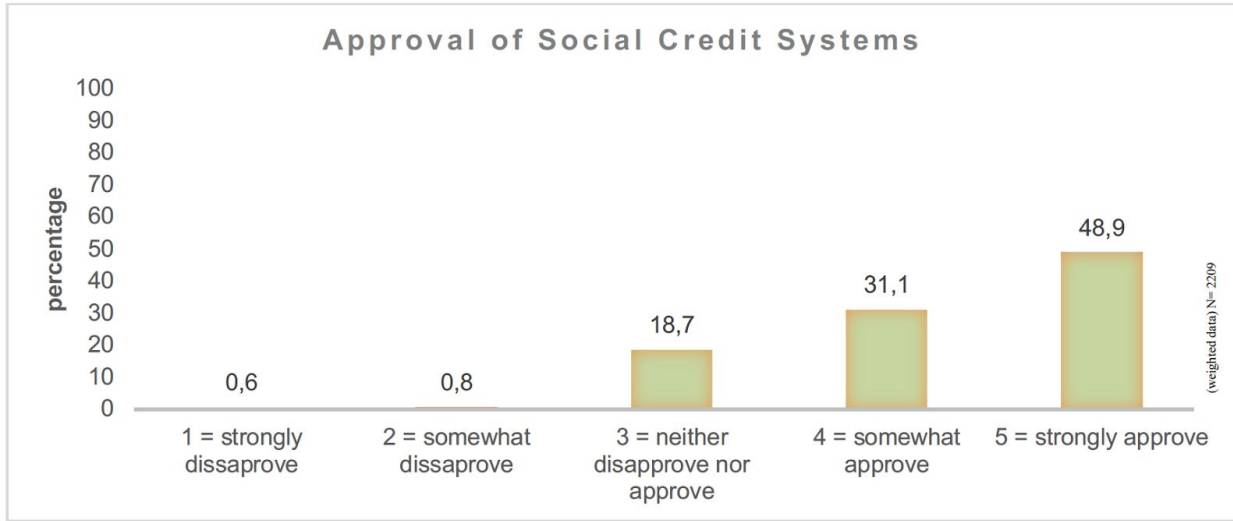


Figure 5.3: Percentage of Approval of Existing Social Credit Systems in China (weighted, N=2209)¹⁶²

Additionally, Figure 5.4 depicts the varying approval rates categorized by what type of social credit system(s) the respondent takes part in. These results show that approval rates are higher among respondents who participate in locally-run social credit systems.¹⁶³ Sixty-four percent of citizens who partake in local government SCSs strongly approve of social credit systems overall. Although still highly approved, approval levels are lower amongst respondents who partake in commercial social credit systems, at fifty-five strongly approving. Kostka attributes this difference in approval rates to the trust Chinese citizens hold in the government over private companies. She notes that citizens generally perceive the government as more trustworthy in managing citizens' data than private companies.

¹⁶² Kostka, 12.

¹⁶³ Kostka, 13.

	Total	Users of Sesame Credit	Users of Tencent Credit	Users of commercial SCSs	Users of commercial SCSs without using governmental pilots	Citizens part of governmental pilot	Citizens part of governmental pilot without using commercial pilots
	N = 2,209	N = 1,309	N = 680	N = 1,639	N = 1,510	N = 160	N = 31
1 = strongly disapprove	0.60%	0.09%	0.15%	0.14%	0.15%	0.00%	0.00%
2 = somewhat disapprove	0.75%	0.38%	0.08%	0.37%	0.40%	0.00%	0.00%
3 = neither approve nor disapprove	18.65%	10.61%	10.85%	12.63%	13.43%	9.73%	34.36%
4 = somewhat approve	31.11%	31.86%	30.31%	32.22%	32.55%	26.20%	17.37%
5 = strongly approve	48.89%	57.06%	58.61%	54.65%	53.48%	64.07%	48.27%

Figure 5.4: Comparison of Approval Rates between Different Groups (Weighted)¹⁶⁴

Moreover, Kostka found that approval rates vary significantly across a variety of demographics, including age, gender, education, income, and region.¹⁶⁵ Fifty-six of respondents between ages 51-65 reported the strongest approval rates. Approval rates were also higher amongst higher income respondents. These also did not vary significantly based on gender. Additionally, approval rates were highest amongst respondents in the highest education group and lowest amongst respondents in the lowest education group. Eighty-two percent of respondents in cities highly approve, while sixty-eight percent of respondents in rural areas reported strong approval. The study also found that there was very little variation between regions. Overall, between the sociodemographic factors analyzed, education had the highest effect on approval rates. Income was the second most influential factor. These sociodemographic results differ from Pan and Xu's results that

¹⁶⁴ Kostka, 13.

¹⁶⁵ Kostka, 13.

younger citizens that earn high incomes and are highly educated are less likely to support social credit systems overall.¹⁶⁶ They found this to result from general concerns related to political freedom and privacy rights.

Furthermore, the influence of the characteristics of the social credit system (the second category depicted in Figure 5.1) on approval rates, like with sociodemographics, varies by factor. The results demonstrated that respondents' perceptions of their own scores did not affect their approval rates, but rather their scores in comparison to others' did.¹⁶⁷ Perceived score in relation to family members and friends was a significant predictor, with sixty percent of respondents reporting that it heavily influenced their perceptions. This means that people did not change their views on the SCS based on whether their score was objectively good or bad. It was when they saw their score compared to that of those closest to them and were able to see that theirs was higher or lower that their opinions on the SCS shifted. Perceived fairness, meaning whether respondents thought that the scores given and process of calculation was fair, was also an influential factor on approval rates. Kostka also found that some participants who were interviewed highlighted that they believe the scoring system might not apply to everyone equally, as those citizens in positions of power might not be under the same scrutiny as other, less-powerful citizens. This perception also shows that citizens therefore might have less faith in the government fulfilling the pillar in the national SCS of using the SCS to reduce corruption levels, specifically in regard to government officials.

¹⁶⁶ Pan and Xu, "China's Ideological Spectrum."

¹⁶⁷ Kostka, "China's Social Credit Systems and Public Opinion," 20.

Finally, the influence of perceived functions of social credit systems, the third category in Figure 5.1, also reported varied results. Mainly, the survey found that citizens see social credit systems and mechanisms to improve 'quality of life' and reduce 'institutional and regulatory gaps' rather than as mechanisms for 'surveillance.'¹⁶⁸ Respondents reported that they believed these systems could lead the more "honest" and "law-abiding behavior" that would improve the quality of life in society. We can also conclude from such an observation that citizens therefore focus more on the perceived benefits for them and the perceived punishments others will receive, which will lead to a better quality of life and lawful society. Seventy-six percent of respondents stated that an issue of mutual mistrust between Chinese citizens exists, which explains why having a regulated system like an SCS might increase trustworthiness. Additionally, few respondents showed concerns with surveillance and social control that could be enabled through an SCS, primarily because many believe that the Chinese government would already have access to this information without an SCS in place.

Another important observation, represented in Figures 5.5 and 5.6, is that citizens hold significant trust in the central government in regard to data privacy and surveillance. Kostka found that fifty-nine percent of respondents believe that the central government should manage a national SCS.¹⁶⁹ Only nine percent believe that local governments should manage such a project. Citizens hold more trust in the central government than in local governments, and many do not trust private companies. Only seventeen percent of respondents reported that they believed that private companies should work with the

¹⁶⁸ Kostka, 20.

¹⁶⁹ Kostka, 22.

government to create a national social credit system. Less than two percent believe that private companies alone should manage a national SCS. Respondents also believe that the central government will use citizens' personal data more responsibly, as seen in Figure 5.6. Seventy-seven percent of citizens trust the local government with their personal data, and forty-eight percent trust provincial governments. Trust decreases as the authorities become more local. This data suggests that overall approval rates for government-run social credit systems are much higher than for commercial SCSs.

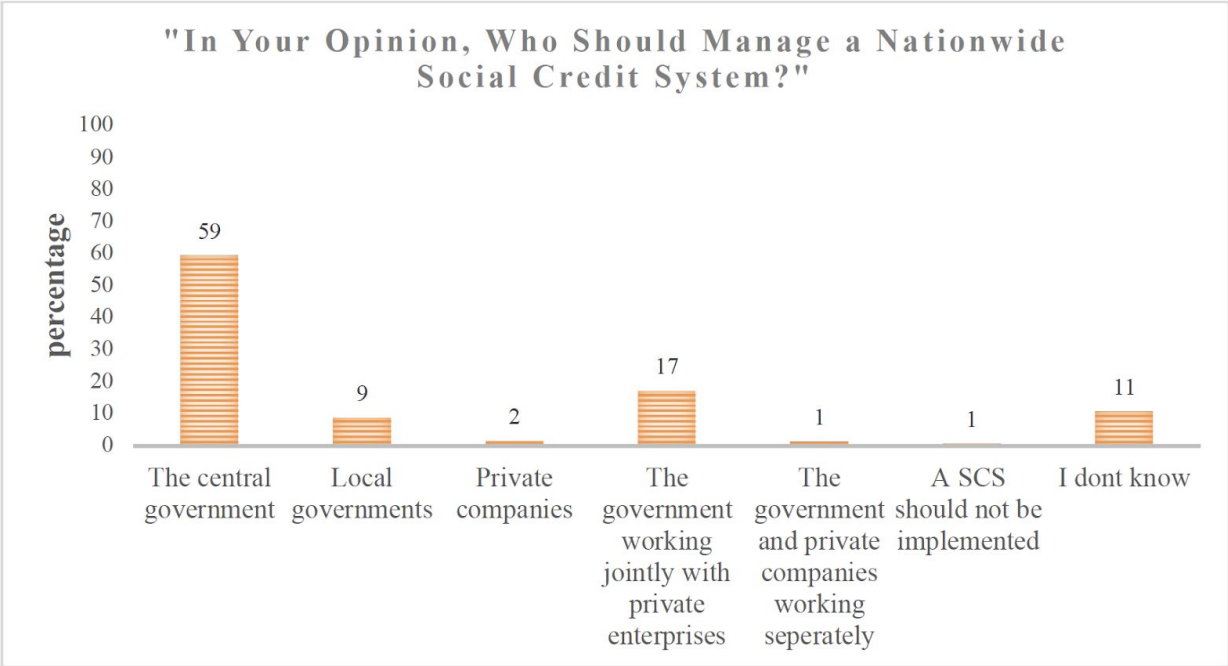


Figure 5.5: Public Opinion of Who Should Manage a Nationwide SCS, in % (weighted, N=2209)¹⁷⁰

¹⁷⁰ Kostka, 22.

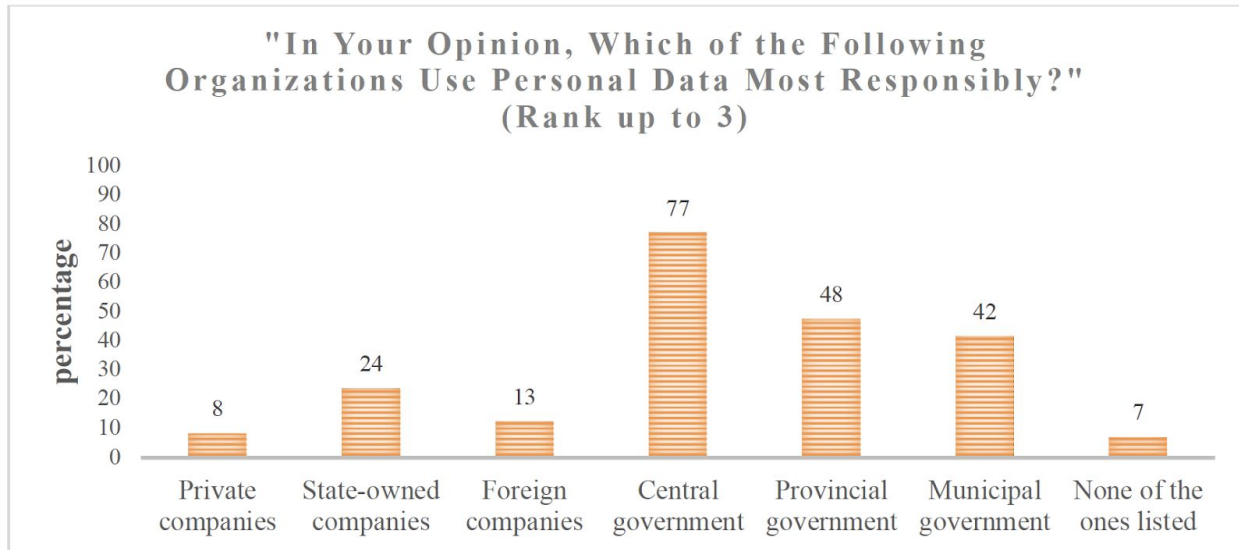


Figure 5.6: Public Opinion on Responsible Data Use by Different Organizations, in % (weighted, N=2209)¹⁷¹

5.1.2: Behavior Changes

Kostka and Antoine (2019) conducted a separate study to evaluate whether citizens' behavior has experienced any change as a result of these social credit systems. This is also particularly focused on the effects of the rewards and punishments schemes enacted by the government and private companies as a part of these social credit systems.

First, Kostka and Antoine, like with approval rates, generated a framework that categorizes the potential factors that might influence behavioral responses between citizens. This is depicted below in Figure 5.7. The three categories, like with approval rates, are: individual characteristics and beliefs, characteristics of SCSs, and benefits of SCSs.¹⁷² The first category includes both sociodemographic factors and political attitudes. Kostka and Antoine used research on the usage of general loyalty schemes used by businesses and how this usage varies across sociodemographic groups. Kostka and Antoine also predict

¹⁷¹ Kostka, 22.

¹⁷² Kostka and Antoine, "Fostering Model Citizenship," 8.

that citizens with strong expressed loyalty towards the government and with committed party membership are likely to experience more behavioral changes. This is because strong confidence in the government might indicate more willingness to comply with the rules set by the SCSs.

The second category encompasses different characteristics of the SCSs such as the amount of information received on the SCS, how much the citizen/user understands the SCS and the transparency of score calculation, whether joining was voluntary (as with commercial SCSs) or mandatory/automatic (as with local government SCSs), and how fair the users perceives the score-giving to be. Kostka and Antoine infer that citizens with more available information on the score calculation process and about the SCS overall will be more responsive to it. They also predict that citizens who voluntarily enrolled in an SCS, as in the case of commercial SCSs, are more likely to engage with the benefits than citizens who were automatically enrolled.

The third category refers to benefits of the SCSs. These include the received advantages and disadvantages and magnitude of the score which, like with approval rates, relates to a citizen's reported score and their perceived score in relation to family and friends. Kostka and Antoine argue that high scores will likely serve as motivation to continue performing loyally and trustworthily. This leads them to claim that citizens who have high scores to more frequently change their behavior in more categories. They also posit that citizens who have already experienced the advantages and disadvantages resulting from SCSs will likely change their behavior in more categories, as they already know how such a scheme works.

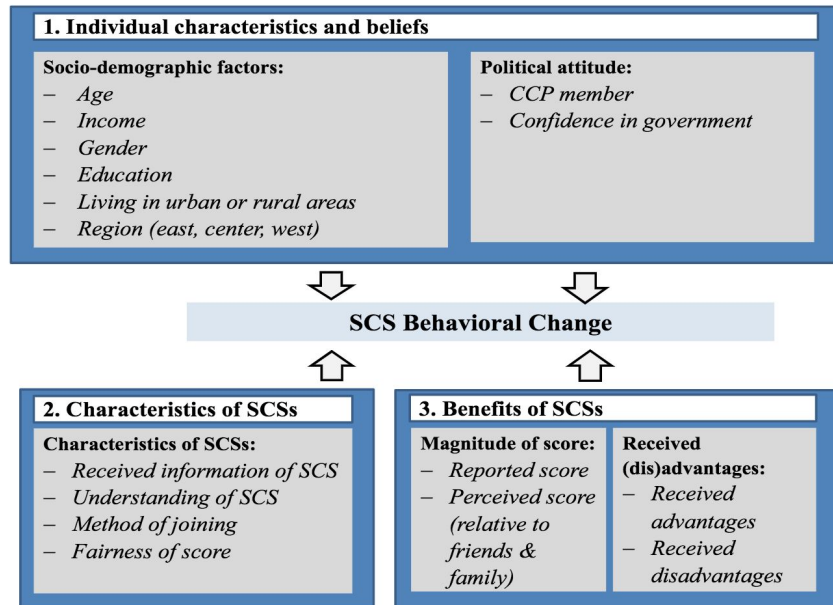


Figure 5.7: Conceptual Framework for Social Credit System (SCS) Behavioral Change¹⁷³

Figures 5.8 and 5.9 depict the results Kostka and Antoine obtained for overall behavioral changes as a result of SCSs and to a variety of specific questions in their research. From this data it is clear that every citizen/user changed at least one thing (in one category) as a result of using a social credit system. Additionally, citizens utilizing government SCSs together with commercial SCSs appeared to have shifted their behavior the most. Also, actions that led to legal punishments held the most weight in influencing behavioral changes. Overall, percentage change in behavior across types of social credit systems was very high, at ninety-three point six percent at the lowest for users only engaging in commercial SCSs only to one hundred percent for users engaging with government SCSs only. Users/citizens who engage with both types found a ninety-four percent behavior change as a result of commercial SCSs and a ninety-nine percent behavior

¹⁷³ Kostka and Antoine, 8.

change as a result of government SCSs. The results for government-run SCS pilots are restricted to citizens who were aware of taking part in a local government pilot.

SCSs Participants	Behavioral Change (%)		Behavioral Change Index (0–12)	Directional Behavioral Change Index (–6 to 6)
	Yes	No		
Types of SCSs				
Commercial credit	94.0	6.0	3.5	0.6
Commercial credit only	93.6	6.5	3.3	0.5
Government	99.4	0.6	5.2	0.7
Government only	100.0	0.0	3.7	0.2
Zhima credit only	91.7	8.3	3.0	0.5
Tencent credit only	96.9	3.1	2.9	0.1
Total (average)	94.1	5.9	3.5	0.5

Figure 5.8: Reported Changes in Behavior¹⁷⁴

	Total (in %) (N = 1,581)	Commercial Participants Only (in %) (N = 1,421)	Government and Commercial Participants (in %), (N = 160)	Government Participants Only (in %) (N = 31)
Have you ever changed your behavior in any of the following ways in order to positively influence your social credit score?				
Changed my shopping behavior	50.8	49.4	63.3	35.0
Shared different content online	25.5	23.2	45.9	24.0
Volunteered (e.g., in my local community)	26.4	23.2	55.2	38.5
Donated money	34.2	31.9	55.8	37.2
Used a mobile payment app for daily transactions	60.9	59.8	70.8	53.6
Other	4.0	3.9	5.2	5.3
Minimum of one behavioral change in order to positively influence the score	91.3	90.4	99.4	100.0
Have you ever suppressed your behavior in any of the following ways to avoid negatively influencing your social credit score?				
Changed my shopping behavior	36.0	34.7	47.7	29.2
Shared different content online	17.8	15.6	37.8	21.4
Adhered to traffic regulations	50.8	48.9	67.7	49.4
Reduced my time playing online games	21.5	20.5	30.7	23.7
Unfriended people on social media	17.4	15.6	33.7	40.6
Other	6.7	6.9	4.6	10.6
Minimum of one behavioral change to avoid negatively influencing the score	85.0	83.8	95.3	97.2

Figure 5.9: Behavior to Positively or Negatively Influence Social Credit Scores (Weighted)¹⁷⁵

Moreover, Figure 5.10 breaks down the percentage behavioral change by demographics to understand which demographics are more susceptible to change. From this data it is clear that while there is little variety by region, citizens in the Western and

¹⁷⁴ Kostka and Antoine, 13.

¹⁷⁵ Kostka and Antoine, 14.

Central parts of China are more likely to change their behavior. Citizens in the middle income group are more likely to change their behavior, and citizens in the younger (aged 14-30) and older (aged 51-65) are more likely to adjust their behavior over citizens aged 31-50. Whether citizens live in cities or in rural areas did not show a significant difference. Citizens with low education had higher rates of behavioral change than citizens in the medium and high education groups. Additionally, there was little variation between genders. Overall, for these sociodemographics (age, income, rural vs. urban, education, and gender), the differences were very minor and show that these variables likely do not play a role in determining behavioral change.

		At least one behavioral change (in %)		Mean of behavioral change index (0 to 12)	Mean of directional behavioral change index (-6 to 6)
		Yes	No		
All SCS participants	Total (average)	94.1	5.9	3.5	0.5
Region	West	96.2	3.8	3.5	0.4
	Central	93.9	6.1	3.5	0.6
	East	92.8	7.2	3.6	0.6
Income	<1,000	93.3	6.7	3.0	0.4
	1,000-4,000	95.4	4.6	3.7	0.6
	>4,000	93.2	6.8	4.1	0.7
Age	14-30	94.4	5.6	3.5	0.6
	31-50	93.7	6.3	3.6	0.5
	51-65	94.4	5.6	2.5	0.3
Rural/urban	Rural	94.4	5.6	3.2	0.4
	Urban	94.1	5.9	3.6	0.6
Education	No education ^a	75.0	25.0	1.9	-0.2
	Low education	97.6	2.4	2.7	0.1
	Medium education	94.9	5.1	3.2	0.3
	High education	94.1	5.9	3.7	0.7
Gender	Female	93.4	6.6	3.3	0.7
	Male	94.6	5.4	3.8	0.5

Figure 5.10: Behavioral Change and Sociodemographics (Weighted, N = 1,581)¹⁷⁶

¹⁷⁶ Kostka and Antoine, "Fostering Model Citizenship," 15.

Overall, Kostka and Antoine found that citizens often changed their behavior because they were driven to improve their personal scores. Eighty-five percent of participants reported that they changed their behavior at least once because they wanted to avoid punishments, penalties, or restrictions. However, they found that the most influential factor causing changes in behavior was receiving rewards and positive results, which encouraged citizens to continue their behavior, rather than receiving negative reinforcement. This means that respondents were more likely to change their behavior and strive for higher standards if they were receiving positive reinforcement (i.e., rewards) rather than negative reinforcement (i.e., punishments). The majority of respondents, ninety-four point one percent, reported that they had changed their behavior at least once wanting to influence their social credit score. The perceived fairness of the SCS scoring also had a positive influence on behavioral responses. Additionally, many of the participants interviewed highlighted that, in their opinion, trust in society can only truly be achieved if the SCSs use harsher measures to punish citizens. However, what makes the SCS effective is that the positive and negative incentives work together. Citizens favor the rewards for themselves and trust that the punitive measures will reinforce the government's goal towards a harmonious society.

Interestingly, despite favoring punitive measures to punish trust-breaking behavior, the results showed that the rewards most significantly incentivized citizens to change their behavior, while the punishments had a very limited, if any, effect on an individual level. Therefore, the rewards served as incentives for citizens to want to change their behavior more than the punishments deterred them from trust-breaking behavior.

5.2: Misperception in the West

Before understanding the three main explanations for why approval rates domestically have been very high, it is important to understand how the Western media is portraying this political system that will soon be in place. It is also important to understand why and how the West may be misperceiving the SCS as many experts have voiced. This could also explain why Western experts have been surprised to see such high approval rates for SCSs in China. Many prominent figures in politics and otherwise, such as Vice President Pence, have compared the system to Orwell's novel *1984* in its extent of social control and surveillance.¹⁷⁷ Many have also compared it to a real-life depiction of a *Black Mirror* episode "Nosedive" which portrays a dystopian society in which citizens are given scores for every aspect of their personal lives.¹⁷⁸ While the existence of such a system in the West would warrant such a response, in China the response has been overwhelmingly positive thus far, seen in Kostka's research presented in the previous sections. Therefore, it is also important to consider that, while by Western standards this system is a privacy breach and violation of basic human rights, it may not be perceived as such by Eastern standards. This section will examine several differences between the West and the East that might influence the perceptions and misconceptions stemming from the West.

The first thing to note is that, while the Chinese Social Credit System and the Chinese government's use of data might be perceived as unethical, many experts are quick to note that the US and many other Western countries are unethical in some regards to data as

¹⁷⁷ Song, "The West May Be Wrong About China's Social Credit System," 33.

¹⁷⁸ Dai, "Enforcing Law and Norms for Good Citizens," 38.

well.¹⁷⁹ While the process of using citizens' data and information by aggregating it into large databases is not a novel practice, China's transparency in terms of how they are utilizing citizens' data and on their long-term plan is.¹⁸⁰ This has made the idea of such a system in China much more nerve-wracking to Westerners. However, many examples exist that show how Western countries have utilized citizens' data without much transparency on how this data was being used. The US National Security Agency (NSA) serves as a "digital eye" in monitoring citizens' actions and online activity.¹⁸¹ Edward Snowden was dismissed from the NSA after leaking information on how the government was manipulating citizens' data.¹⁸² The Cambridge Analytica and Facebook scandal also publicized the extent to which private companies and governments utilize and even misuse citizens' information. Technology has become crucial today in enabling this sort of surveillance. In 2015, the US Department of Transportation attempted to include social network information, location history, and purchase history in a preflight inspection process.¹⁸³ This proposal did not go through as it received harsh criticism, likely because political power is controlled more thoroughly in the West through existing frameworks to avoid abuses of power. Nonetheless, the fact that it was proposed shows how much control government agencies could have over citizens' personal data. Other examples include ratings and reviews systems and credit scores that exist in many Western countries, or

¹⁷⁹ Timofeeva, "The Transition to a Digital Society in the People's Republic of China (Development and Implementation of the Social Credit Score System)," 109.

¹⁸⁰ Lee, "Datafication, Dataveillance, and the Social Credit System as China's New Normal," 952.

¹⁸¹ Timofeeva, "The Transition to a Digital Society in the People's Republic of China (Development and Implementation of the Social Credit Score System)," 109.

¹⁸² Lee, "Datafication, Dataveillance, and the Social Credit System as China's New Normal," 954.

¹⁸³ Timofeeva, "The Transition to a Digital Society in the People's Republic of China (Development and Implementation of the Social Credit Score System)," 109.

even a microchip program used in some areas in Scandinavian countries to improve daily transactions.¹⁸⁴

Additionally, Backer (2019) claims that while the West is quick to criticize the development of this system in China, they tend to under-represent the similar developments occurring in the private and public sectors in the West.¹⁸⁵ While Backer believes that the Chinese developments in creating such a system warrant significant attention, it is also very alarming to see Western enterprises following in their footsteps outside of the public eye. He also notes that in the West the government utilizes data collected by private actors, and these private actors often access public information such as census data as well. Therefore, he believes that while it is valid to be alarmed by the Chinese SCS and its implications, we should also be alarmed by what is happening in the West through different, less publicized, mechanisms. We are assessing the use of this system through Western characteristics, where data sharing and data analysis is approached in a very different way.

Moreover, various nuances in meaning have led to misconceptions on the SCS. Firstly, the term 'social credit' is not an entirely accurate translation of the Chinese name for the system, called 'shehui xinyong' (社会信用).¹⁸⁶ In Chinese, 'xinyong' (信用) by definition is more than just 'credit' and also encompasses a variety of moral virtues, including trustworthiness, integrity, promise-keeping, and others.¹⁸⁷ This allows it to apply to a variety of contexts that include social aspects and behaviors such as political loyalty,

¹⁸⁴ Backer, "China's Social Credit System: Data-Driven Governance for a 'New Era,'" 214.

¹⁸⁵ Backer, 214.

¹⁸⁶ Dai, "Enforcing Law and Norms for Good Citizens," 39.

¹⁸⁷ Dai, 39.

purchasing behaviors, and ecofriendliness, among many others, without making it seem like these are treated the same as one's financial behavior. This insinuates that when we hear 'social credit system' in English, we envision this system as one that is crediting social aspects of our lives in a regimented way. Whereas in China the name might be more clear in transmitting the purpose of the system and its tie to morality and virtue, especially to Confucianism and the role it plays in society.

Another term that holds a different meaning in the Chinese cultural context is 'privacy.' The West has their own credit systems that monitor financial activity and rate people based on their financial behavior. Private companies also control a significant amount of personal data. The above examples show that Chinese companies in the past have corroborated data on their users to government agencies. However, the West's definition of data centers around individual autonomy and rights, which explains the backlash these kinds of data privacy breaches have received from the public.¹⁸⁸ Privacy in China is "grounded in the responsibilities of the state" and "has a more public and communal character."¹⁸⁹ Furthermore, in China privacy is rooted in Confucian principles on personal identity.¹⁹⁰ Culturally, being a private person is often interpreted as if you are being secretive and hiding something shameful. Therefore, people favor being publicly surveilled by those around them. Given the Western notion of privacy, it is misleading to apply that perception of privacy to the context in which the national SCS is being employed in China. As a result, the Western response to this SCS might result from a different

¹⁸⁸ Backer, "China's Social Credit System: Data-Driven Governance for a 'New Era,'" 211.

¹⁸⁹ Backer, 211.

¹⁹⁰ Engelmann et al., "Clear Sanctions, Vague Rewards," 70.

understanding of privacy. This could also explain why approval rates thus far are extremely high, and why the West's reaction to these is that of shock and surprise.

Additionally, the extent to which AI and facial recognition will be used to surveil citizens as part of the scoring is still unclear.¹⁹¹ Dai (2020) also claims that the "scary picture" that is being constructed in the West of the technological control the government will have on its citizens might be better explained as a Western "acute sense of anxiety about their own fate in the data society."¹⁹² Also, Dai argues that the national SCS is the government's attempt to amend their past failures in creating a legal system that adequately enforces social and legal norms.¹⁹³ Therefore, this system is intended to address these gaps and minimize them to improve rule of law in China to ensure that it is more effectively and fairly applied across China.

Furthermore, many of the regulations the national SCS intends to enforce stem from pre-existing laws and social norms that should otherwise be followed without such a system. These, however, are not regulated nationally as a result of performance gaps in the government's legal system. As Dai explains, the punishments driven by the SCS exist to "strengthen the enforcement of previously 'toothless' legal norms."¹⁹⁴ Although thousands of laws were introduced since the late 1970s following the death of Mao, many failed to enforce their intended behavioral constraints as a result of poor enforcement. Furthermore, many government agencies tasked with enforcing many of these laws and regulations are limited by the resources they have access to. Many government agencies

¹⁹¹ Dai, "Enforcing Law and Norms for Good Citizens," 38.

¹⁹² Dai, 38.

¹⁹³ Dai, 39.

¹⁹⁴ Dai, 39.

and local governments complain that they are understaffed, underfunded, or are not given the power necessary to adequately enforce the measures they are tasked to. Therefore, many legal breaches that should be punished go unpunished because of this lack of resources. Also, issues of corruption, bureaucratic incompetence, and others make law enforcement very unfair and unstandardized. For these reasons and more, a system such as the SCS would attempt to reduce these limitations in the legal system. Although, it is unclear whether this framework would be effective in preventing any government agency from abusing this power.

The national SCS would likely improve these inefficiencies in law enforcement in a variety of ways. Using a centralized social credit system would first improve inter-agency communication, enhancing the information sharing process between different levels of government as well.¹⁹⁵ It also would tackle the issue of underenforcement from the legal branches by pooling in resources from external public agencies and other branches of government. This would ideally lead to an increase in accountability for enforcement, although whether the system would follow through with this fairly is unclear. Finally, by relying more heavily on technology and automation processes, it would theoretically increase political integrity and competence as government behavior would hypothetically be more greatly monitored. However, there could obviously still be loopholes that could allow for corruption to take place, but overall it would theoretically decrease.

Additionally, many laws in China are tied closely with morality and social norms. These concepts, such as 'harmony,' 'trustworthiness,' and others stem from Confucianism

¹⁹⁵ Dai, 40.

which is deeply rooted in the culture. The first systems of policing in China were also rooted in these Confucian principles and these are still very prominent today. For example, in the city of Qingzhen in the Guizhou province, the government in 2010 started an 'Honest Farmer' program to incentivize its residents to follow "the good moral norm of promise keeping."¹⁹⁶ Guizhou is one of the most underdeveloped provinces in the southwestern part of China. The 'Honest Farmer' program intended to incentivize local farmers through government benefits, which included loans for agribusiness, subsidies, and other kinds of benefits as a result of how well citizens and households performed in response to a new set of village moral norms. Some norms followed existing legal requirements, while others tied more closely with Confucian principles such as "harmony within the family, good neighborliness, diligent work ethics, or against lavish spending."¹⁹⁷ Many villages and towns other than Qingzhen have instituted similar village norms that draw on these principles of morality.

5.3: Historical Explanations

The Chinese Social Credit System, as discussed early, is strongly rooted in principles of morality that stem from Confucianism. These same principles were used to shape the historical systems of policing and surveillance used by Chinese emperors in the Ming and Qing dynasties. Chinese political leaders often claim that a national SCS will lead to a "harmonious socialist society."¹⁹⁸ This same sentiment is core to the CCP ideology, yet its roots go much further back than that as the principles themselves are rooted in

¹⁹⁶ Dai, 41.

¹⁹⁷ Dai, 41.

¹⁹⁸ Hansen and Weiskopf, "From Universalizing Transparency to the Interplay of Transparency Matrices," 11.

Confucianism. Confucian roots can be observed in public policy from both Imperial China and Hu Jintao's regime.

The Imperial Chinese legal system is mainly rooted in two schools of thought—Confucianism and Legalism. Confucianism focused heavily on morality and buzzwords often heard of in regard to the policing systems in Imperial China and in today's SCS—words such as 'harmony' and 'trustworthiness.' One of the main pillars of Confucianism is establishing a well-organized society.¹⁹⁹ Rather than establishing a legal system, many early Confucian scholars instead promoted morality and ritualism to serve this purpose. Confucianism preached that "wrongdoers could be taught to feel ashamed of their improper actions through education and moral persuasion."²⁰⁰ A Confucian view on ritualism was that society should be hierarchical and that every citizen held a specific role in society. Followed respect of these societal roles would result in a harmonious society, where individuals did not exist as free people, but rather as parts of a complex social network. This view clearly correlates with the policing systems discussed in Chapter 2 where rewards and punishments schemes existed to shame citizens. Additionally, the *baojia* and *lijia* had very clearly defined hierarchies that enabled for the government to increase their control over rural areas of the Empire.

Legalism, while contrary to Confucianism, also strongly emphasizes the importance of rewarding those who act according to laws and severely punish those who break them.

²⁰¹ Legalism centers on the belief that humans are inherently evil, while Confucianism believes that people are inherently good. Therefore, legalism focuses on the punishment for

¹⁹⁹ Teon, "Law In Imperial China – Confucianism And Legalism."

²⁰⁰ Teon.

²⁰¹ Teon.

wrongful deeds and of teaching citizens to follow social norms or face legal punishments as a result to correct their behavior. This ideology is also seen in the rewards and punishments system.

Hu Jintao also relied heavily on Confucian principles for his public policy aimed at creating a harmonious society. His policy, the Harmonious Society (和谐社会 or *hexie shehui*), aimed to address more social issues in socioeconomic gaps, corruption, and others present in Chinese society at the time.²⁰² Hu tied morality and Confucian moral principles to the economic reforms he hoped to achieve in China at the time. Many other leaders, including Deng Xiaoping, referred to Confucian principles to influence their public policy. Therefore, Imperial China was not alone in using Confucianism to support and motivate their policymaking.

Given this extensive history of Confucianism in politics that mirror the central pillars of the SCS, one could assume that the high approval rates are a result of a long history of Confucian-led ideology backing political regimes. As a central pillar of Chinese society, culturally Chinese citizens would most likely approve of a system that is rooted in the same ideology that has for centuries been deeply connected to Chinese politics and public policy. This interpretation of morality is very present in many aspects of Chinese society, especially in politics.

²⁰² Geiss and Holt, "Harmonious Society': Rise of the New China," 75.

5.4: Political Explanations

The political climate Xi has fostered in China can also be used to explain why approval rates for a social credit system are very high. Employing this kind of a system fits closely with Xi's goals for Chinese politics, specifically with his "New Era" approach. When his predecessors, particularly Deng Xiaoping and Hu Jintao, aimed to introduce Westernized public and economic policy into communist China, they emphasized the importance of doing so with "Chinese characteristics."²⁰³ Xi in his recent policies throughout the past decade has emphasized the importance of strengthening those "Chinese characteristics" while deviating more from Western politics.

One of Xi's "New Era" policies was to reform the legal system to rely less on Western principles. Xi firmly believes that China can achieve better social development and economic reform through systems of ratings that rely on ongoing supervision, rather than on systems of laws, which was inspired by Confucian teachings.²⁰⁴ The SCS can therefore be interpreted as "the heart of a new vision of governance," central to Xi Jinping's goals to separate the East further from the West.²⁰⁵ In China, the people have different expectations of the government than citizens do in Western countries, and these include an expectation that the government will regulate moral behavior. Given the many problems that exist today with China's legal structure, especially regarding the lack of proper enforcement and in corruption, many Chinese organizations, both in politics and business, see a need for a system that encourages trust.²⁰⁶

²⁰³ Geiss and Holt, "Harmonious Society': Rise of the New China," 77.

²⁰⁴ Backer, "China's Social Credit System: Data-Driven Governance for a 'New Era,'" 209.

²⁰⁵ Backer, 209.

²⁰⁶ Song, "The West May Be Wrong About China's Social Credit System," 35.

In the 19th CCP Party Congress, the government raised the need for a legal system that relies less on existing Western methodologies, such as constitutionalism, that can fit the moral ideals that exist in Chinese society.²⁰⁷ Social credit is envisioned as central to the newly forming Chinese legality and a new way of enforcing social norms through law. As a result, rule of law now holds a new meaning in China, as it no longer encourages obedience to laws but rather that one follows the expectations laid out by the government.

Therefore, it is possible to understand that given how poorly the legal system in China works today, many citizens would be in favor of a system that could improve this. With a very high level of corruption and fraud, citizens frequently disapprove of the existing legal system in China.²⁰⁸ Laws and regulations do not perform as intended in China because the means of enforcement are highly flawed.

Additionally, as China is an authoritarian regime, it is also important to consider that high approval rates might result from a fear of opposing the government. Living in an authoritarian regime, few people will admit to disapproving of a government initiative given the fear of possible repercussions that exist. Genia Kostka observed that as a limitation in her work evaluating high approval rates, although she argues this likely did not influence the results much.²⁰⁹ This is also an important consideration in understanding the political climate that might lead to an overwhelmingly positive response to a national SCS. More research is needed to fully determine whether perceptions of the system are actually as high as Kostka found them to be. However, at the time Kostka's studies are the only ones that provide this kind of an analysis on citizens' perceptions of SCSs.

²⁰⁷ Backer, "China's Social Credit System: Data-Driven Governance for a 'New Era,'" 213.

²⁰⁸ Dai, "Enforcing Law and Norms for Good Citizens," 39.

²⁰⁹ Kostka, "China's Social Credit Systems and Public Opinion," 12.

5.5: Psychological Explanations

One final explanation for the high approval rates is the psychological ties to a rewards and punishments system. A BBC survey conducted in October 2015 found that in Beijing most citizens found the implementation of a national SCS to be very positive.²¹⁰ Very few respondents focused on the repercussions that would result from a low rating and the detrimental effects these scores could have on their futures. Many instead focused on the variety of benefits that would come from the rewards part of the system.

Furthermore, millions of Chinese citizens have already opted in voluntarily to participate in a trial version of the national surveillance system.²¹¹ Citizens were drawn by the possibility of earning rewards and high ratings to the extent that it became a popular high status symbol amongst Chinese citizens. While some sociologists tie this to a likely fear of repression from the authoritarian government, many economists tie this to the favorability of the awards and privileges that result from positive participation.

The phenomenon in psychology of using rewards and punishments to trigger certain behaviors is known as 'operant conditioning.' Operant conditioning is a means of learning through rewards and punishments. This leads to behavior controlled by consequences.²¹² This type of conditioning shapes the environment by controlling what qualities and behavior citizens should aim to achieve and which ones they should be deterred from embodying. Operant conditioning is effective by reinforcing what constitutes as 'good' and 'bad' behavior by utilizing rewards and punishments. This conditioning also

²¹⁰ Timofeeva, "The Transition to a Digital Society in the People's Republic of China (Development and Implementation of the Social Credit Score System)," 106.

²¹¹ Timofeeva, 106.

²¹² Staddon and Cerutti, "Operant Conditioning," 115.

focuses on "reversible behavior."²¹³ In the Chinese context, this relates to Confucian principles in that all humans are believed to be inherently good and that those who act badly are in doing so deviating from the default. In rewards and punishments schemes, citizens are more likely to be driven by the possible rewards they will achieve for good behavior over the punishments that would deter them from acting poorly. These rewards are also closely tied to citizen satisfaction, which can help explain the high approval rates SCS systems in China have received thus far. Accordingly, many psychological studies show that rewards significantly increase brain activity and heavily motivate behavior.²¹⁴

Moreover, many citizens also believe that the changes that will likely result from the national SCS will be overwhelmingly positive. Timofeeva (2020) found that citizens believed that others would be driven by pursuing the status symbol of a "trustworthy citizen" and of the good points that they would achieve in public rankings.²¹⁵ The pursuit to achieve a high ranking is therefore likely to motivate citizens to engage with a national SCS in order to achieve status symbols that include the terminology issued in the redlist's rewards. Many citizens have opted to engage with the system already in its early stages in pursuit of these status symbols and popularity-drivers.

²¹³ Staddon and Cerutti, 117.

²¹⁴ Black, "The Direct Control of Neural Processes by Reward and Punishment: Operant Conditioning of the Electrical Activity of the Brain Suggests the Possibility of Direct Control over Important Central Nervous System Processes," 241.

²¹⁵ Timofeeva, "The Transition to a Digital Society in the People's Republic of China (Development and Implementation of the Social Credit Score System)," 107.

5.6: Conclusion

This chapter has evaluated a variety of factors that have driven a very positive response to a national SCS in China thus far. By first exploring the high approval rates, we see how different sociodemographic groups are responding to social credit systems generally in China. Despite some differences between these groups, the Chinese population broadly is in favor of utilizing a national social credit system.

Three main factors can be assumed to influence these high approval rates in a Chinese context. Firstly, the history China has of Confucianism and morality tied into politics and public policy is one explanation for why approval rates in China have been very high. As we saw in Chapter 2, systems of surveillance and of rewards and punishment date back hundreds of years. They are also deeply rooted in Confucianism, tying law to morality and social norms. Therefore, it is understandable that a system aiming to improve the Chinese legal structure would also include social principles. This seen from a Western lens is very surprising as our legal systems are not rooted in social norms and 'harmony.'

Secondly, the political climate in China currently favors this kind of a system. China's legal system at this time requires strengthening given that many corruption and fraud cases exist today. The legal system also lacks power and resources to properly enforce laws, which weakens the citizens' willingness to comply with these regulations. Therefore, a system that holds citizens more accountable for their actions without requiring for the government to employ more funds towards staffing and legal enforcement is very favorable.

Thirdly, psychological explanations can also justify these high approval rates. Operant conditioning, a scheme to change animal behavior through rewards and punishments, and the results of it are a key driver in the success of a social credit system by Chinese standards. The Chinese government aims to set a model for what constitutes ideal and trustworthy behavior. Rewards schemes drive satisfaction and motivate animals to portray this desired behavioral standard. Therefore, we can understand why citizens are in favor of a system that is providing them with desirable rewards. These rewards are also developing into a status symbol.

Finally, the Chapter also analyzed existing literature on how the West might be misinterpreting the Chinese Social Credit System. This also helps explain why Western literature has frequently shown surprise to how Chinese citizens are reacting to these social credit systems. Without a thorough understanding of Chinese culture, it is difficult to understand from a Western perspective why a system like this one can possibly have a positive effect on society.

Chapter 6: Conclusion

The Chinese Social Credit System marks a new step in China's system of authoritarian control. By reimagining systems of discipline to no longer overlap with rule of law, Xi has dichotomized law and discipline in the Chinese context, which were previously intertwined. Although, as seen in the second chapter of this thesis, the central components of the national SCS date back hundreds of years, technology has enabled for this system to surveil citizens much more comprehensively than historically possible.

There are many implications of this system. Firstly, it is important to understand the Chinese SCS comprehensively because Western mainstream journalism frequently overdramatizes it by only focusing on how it surveils citizens' social behaviors. Given this narrative, its comparison to 'big brother' and *Black Mirror* are extremely valid. However, thoroughly understanding the system sheds light on many political issues in China that are less covered by American mainstream media that digress from the 'big brother' narratives. This includes issues in Chinese rule of law and the frequent lack of legal enforcement, corruption, fraud, and many others. Xi's regime consistently violates its citizens' personal rights and operates an extremely corrupt government. Despite this corruption, the government still achieves impressive economic success.²¹⁶ This is not to say that Chinese corruption does not get covered by American journalists. Rather, the implication in this case is that rather than only providing alarmist reports on Chinese policies, the global audience should do more to avoid letting corruption and information gaps in China widen

²¹⁶ Taplin, "China's Corruption Paradox."

beyond control. The overdramatization of certain issues in China and the underreporting on others leads to information gaps and imbalances that should be addressed and adjusted.

Another implication of this thesis is that it is important to thoroughly understand how China is constructing a national SCS and the government is collaborating with private companies to avoid something similar happening in the West. Not only do companies like Google, Amazon, and Facebook have data on almost all citizens (outside of China, as most of these are banned in China) through one platform or another, but tech giants like Microsoft hold contracts with government agencies, specifically for national defense projects.²¹⁷ Edward Snowden already revealed how the US National Security Agency (NSA) has access to and manipulates extensive data on every citizen.²¹⁸ While Americans are frequently shocked by the parameters of the Chinese Social Credit System, American tech giants alone could create comparable systems with the data they already have on their users. The key difference between American and Chinese data collection is that China has become more transparent about how they are using citizens' data and the kinds of information they have been collecting thus far.²¹⁹

One final implication is that a comprehensive understanding of the Chinese Social Credit System demonstrates how many policies in China are rooted in historical policies and rely heavily on ancient Chinese thought. Chapter 2 analyzed a variety of policies that date back centuries that share core principles with today's SCS. Ancient Chinese philosophy also continues to influence Chinese culture and evidently holds a strong position in the

²¹⁷ Gregg, "Judge's Order Halting JEDI Work Just the Latest Roadblock in Defense Dept.'s Frustrating Journey."

²¹⁸ Timofeeva, "The Transition to a Digital Society in the People's Republic of China (Development and Implementation of the Social Credit Score System)," 109.

²¹⁹ Lee, "Datafication, Dataveillance, and the Social Credit System as China's New Normal," 952.

politics the government continues to uphold. To better assess Chinese culture and politics, it is important to understand its sociopolitical history. This thesis aimed to also provide a framework by which to understand this and evaluate Chinese policies accordingly. Leaders rely heavily on their history and past successes and failures to drive future policymaking. The national SCS project is only one of many examples of this.

One significant limitation in this project is that very limited literature exists on this topic, which reduced the number of publications available to thoroughly address diverse perspectives on the subject. Additionally, the thesis did not assess publications written in Chinese due to language barriers. This could have provided varying narratives to assess in this meta-analysis. Nonetheless, many of the existing publications are the first to focus or one of few to research their given topics, such as in the case of Kostka (2018) analyzing high approval rates. Additionally, there is very limited literature on the SCS because the project has still not been finalized. Hence, much of the existing literature relies on existing SCSs in China, both government-run and commercial. Once the policy becomes widely proliferated, more literature is likely to emerge.

Moreover, this thesis did not touch on the ethics of a system like the national SCS and the implications this holds for human rights. While this thesis did not aim to assess this, more research should be done on how this aligns with moral human rights standards. The ethics of a government pursuing this kind of a project in a country like China are extremely important to consider and should be understood more closely.

Effectively, the Chinese Social Credit System will reshape modern surveillance and redefine the effects of political transparency (*or apparent and/or partial* political

transparency), especially in authoritarian regimes like China's. As the system is meant to be finalized in 2020, more literature is likely to arise in the near future. Most existing literature used in this thesis was published in 2019, meaning that a lot is likely currently being written and even more will arise as more information on the SCS becomes available. This will help journalists answer whether the system will resonate Orwellian characteristics and satisfy the alarmist discourse and whether the system will live up to its expectations. Nonetheless, the national SCS is just one of many parts in Xi's plan for 'New Era' politics. Many of these policies are ingrained in the same core principles and the SCS will likely not be the only government project that utilizes big data on a mass scale. Only time will tell how significant a role the national SCS will play in Chinese citizens' lives.

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