A STUDY of the
SOCIAL CREDIT SCORE SYSTEM and the IMPLICATIONS
it may have in CHINESE SOCIETY

by

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ABSTRACT

This thesis examines the social credit score (SCS) system of China and the implications that it may have in Chinese society. The SCS is a revolutionary accountability system that is touted to ascertain a person's trustworthiness of a person. An individualized score is produced by a complex algorithm which takes into account both social and financial behaviors. My research, comprised primarily from secondary qualitative data, discusses the SCS system and analyzes the political, social, and economic implications that the SCS may have on Chinese society. Conflict theory is utilized to help contextualize my findings and explain the increase in authoritative control I predict will result from the implementation of the SCS system. While the full effect of the SCS is yet to be seen, my research indicates that it will play a role in nearly every aspect of the social behaviors and financial decisions that the majority of Chinese make on a daily basis.

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I. INTRODUCTION

The People's Republic of China is in the process of implementing a revolutionary system involving a social credit score. China's 1.4 billion citizens will be given an initial score that will be impacted positively or negatively due to each individual's actions. These actions, both social and financial in behavior, are accounted for and incorporated into a complex algorithm to produce a unique cumulative score for each person. A citizen's score will be constantly updated as their fiscal actions and social interactions are continually monitored. The People's Republic of China has adopted the SCS system framework from that of several opt-in pilot programs from private corporations. The compulsory system currently being implemented will serve the purpose of measuring the "trustworthiness" of each citizen. The societal impacts of the SCS are yet to be observed in the fullest extent, but an increase in control and accountability is expected to be seen. The purpose of this research is to introduce the SCS and evaluate the implications that it may have in Chinese society.

The SCS system that China is experimenting with raises significant questions. As China and many other countries are entering the big data age, it is important to ask how such data will be used, and by whom, and for what purpose? Focusing on the SCS system, since China is the first country trying to establish a comprehensive national system like this by state, this thesis will examine the SCS system in five chapters. Following this introduction, Chapter two has three sections: the SCS system in comparative and historical perspective, research methodology, and Conflict Theory in relation to the SCS system. Chapter three discusses the SCS system, its origin and government conveyance. Chapter four is dedicated to the analysis and evaluation of the SCS in

five sections: Increase in authority, public perception, political and social implications, economic implications and personal experience, followed by a conclusion.

II. "BIG DATA" AGE: BACKGROUND, LITERATURE REVIEW & METHODOLOGY PRECEDENTS

While the world is entering the big data age, the idea of standardizing the assessment of citizens through a social credit score system is not new. What is new is the unprecedented collection and accumulation of personal data due to technological advances. Several countries around the world have implemented programs that closely resemble one part or another of the SCS system in China. For example, in Chile, the Directory of Commercial Information (DICOM) is used to outline a citizen's credibility in order to reward or punish them. Certain data extraction methods have been implemented to develop an individualized DICOM for each Chilean citizen, which has an effect on the economic life of the country. People with poor DICOM scores have found it difficult to obtain loans, find housing, and get jobs in Chile. There have been many reported economic externalities with the DICOM system that can be expected to be mirrored in China. Different from the DICOM system in Chile, the SCS incorporates social behavior into the score the system produces. However, it is of note to point out the precedent that Chile has set for China (Kormoczi, R).

Chile and China are not alone. Other countries, including Russia, Germany, the United Kingdom, and even the United States have toyed with the idea of implementing programs with certain similar characteristics of the Social Credit Score system (Schaer, 2018). In Russia, it is reported by Dmitry Kuznetsov, the head of IT at Russia's Pension Fund that "every achievement

in a person's life – the misses, mistakes, big projects - will be recorded" by 2025 through state-gathered digital profiles (Times, 2018). The Russian government plans to enable this through a $53 billion dollar Digital Economy Program, with one of its main focuses being a "personal development trajectory" program. This will enable a student's academic success and failures to be tracked in order to one day be passed on to employers (Times, 2018). The idea of digitizing the economy and documenting personal information in a government data base is often met with skepticism. Many see the monitoring of daily activities as an opportunity to tighten societal control.

Another example of where this has taken place in the world recently is in Venezuela where the Chinese telecom giant, ZTE, has aided Venezuela in developing a 'social credit system' of their own. This is occurring through the introduction of the "smart card," or otherwise known as the "fatherland card" (Reuters, 2018). The card claims to provide better service to its patrons by collecting a range of information on the individual card holder. This information, stored in a government database, can include medical history, social media presence, membership of a political party, or even whether an individual has voted or not. The "smart card" has emerged as a part of Venezuela's $96 million dollar government effort in an attempt to bolster national security. Skeptics view the "smart card" as an attempt by President Nicolas Maduro to stifle political opponents and increase social control. In a bid to get citizens to sign up, Maduro has offered a range of incentives in the form of prizes, such as fuel discounts and groceries. Evidently, it has been successful. As of November of 2018, over half of the Venezuelan population, nearly 18 million people, have signed up for the "smart card" and handed over their information. This development did not happen over night, but rather was instigated as early as 2008 when a

Venezuelan delegation was sent to Shenzhen, China. Anthony Daquin, a member of that delegation, was tasked to seek information for an efficient way to provide identification credentials for the millions of Venezuelans who lacked basic documentation. The situation in China was similar at the time; thus, Venezuela sought to observe their tactics in handling the domestic documentation issue. Daquin reported that the delegation was amazed by China's technology and quickly realized the wider implications. "What we saw in China changed everything … they were looking to have citizen control" said Anthony Daquin (Reuters, 2018). However, Daquin was unable to voice his concerns because he was detained, beaten, and accused of treasonous behavior. He was forced to flee Venezuela. The close relationship that China and Venezuela maintain is indicative of the technology they share and the institutions of control they are developing for the management of their populations (Reuters, 2018).

It is clear that China is not the only country, nor the first, that has toyed with some of the ideas that constitute the SCS. In an increasingly globalized and digitalized world, the similarities between China and other countries are sure to arise, especially through programs such as this. From China to Russia to Venezuela, social credit is an emerging accountability tool that these and other governments will look to implement in the near future (Kormoczi, R).

Historically, China has been dominated by an agrarian society. As recently as 40 years ago, China was operating on outdated economic policies that kept the country stagnant, inefficient, and isolated from the outside world. However, since the economic reform in 1979, China has had one of the most rapidly growing economies and GDP's of any nation in recorded history. This is an incredibly impressive feat on the part of China. However, that accomplishment has not come without its share of growing pains.

While the Chinese government has been operating under the assumption that economic growth is essential for maintaining social stability, the undeveloped infrastructure of their booming economy has caused some issues on this front. Because of a lack of banking accountability, fraud and counterfeiting have become serious domestic economic issues in China. In essence, the Chinese economy grew faster than their internal financial banking system. As a historically agro-economy, relatively few citizens even had banking accounts. There was no efficient or organized system to prevent acts of fraud, selling counterfeit goods, and defaulting on loans being accounted for or punished. The system starkly under-served the booming economy, resulting in issues with trust. A need for accountability and control emerged. Thus, the beginning plans for the Social Credit Score were conceptualized. (Morrison).

METHODOLOGY

My research utilizes a mixed methods approach in order to understand and address the Social Credit Score system that is being developed in China and the potential impact that it could have. I collected both primary and secondary sources in order to produce qualitative data. The majority of the data I collected was from secondary sources that were used to gain an understanding of the way in which the nascent Social Credit Score system came to be and operate. Some of my primary sources were collected through interviews and conversations with knowledgeable individuals; however, the larger portion of the primary datum was collected from my own experience traveling and studying abroad in China during the summer of 2018. Unfortunately, due to the unpredictable nature of the COVID-19 pandemic, my intent to gather more primary data through interviews and meetings was limited. I was curious to interview foreign exchange students on campus, as the University of Mississippi has a partnership with the North China Uni-

versity of Technology (NCUT), the school I attended in China. Because these exchange students have the unique experience of living both in China and the United States, I anticipated that their perspectives on the SCS system would be enlightening and beneficial to my study. Although I could not include it in this research, I am interested in the possibility of incorporating primary source interviews of exchanges student's perception of the SCS in the future.

The Foreign Policy Research Institute, the National Bureau of Asia Research, and the Congressional Research Institute all aided as secondary sources. Additionally, because of the nature of the subject, many sources were garnered through news articles or websites, including pieces by the New York Times, the Atlantic, TIME magazine, CNBC, ABC, and BBC. These articles provided specific information about how the Social Credit Score system operates, actions that factor into its algorithm, and the financial or social behavior that could impact the SCS. These secondary sources, obtained by hours of examining online websites and journals, were crucially important to my research. I came across many of these valuable pieces by searching keywords relevant to the social credit score, such as "Chinese credit," "SCS," and "credit score algorithm 2020," and so on. Once I had collected enough applicable information to work with, I began to build a picture of the current state of the Chinese Social Credit Score system. I was then able to derive theories of how the SCS may potentially impact the people of China and the social repercussions that a system such as this could have.

I saved all of the sources that I was able to use and created a running list that grew with my research. This list of sources was then converted into a bibliography, organized in APA format, to accurately account for and credit my work. The mixed methods approach was thus a success in creating a holistic picture of the SCS through inductive reasoning. In this way my obser-

vations and the data I collected led to the body of work produced. I was then able to use these

premises to supply evidence for and support the conclusion.

CONFLICT THEORY

The theoretical framework that could serve to better contextualize the actions of the Chinese government, through the implementation of the SCS, is the Conflict Theory. Conflict Theory argues that society is in perpetual conflict as a result of a competition for resources and states that societies are not inherently consensual and conflict free. Instead, societies tend to exhibit structural power divisions and resource inequalities that lead to conflicting interests (Rössel, J). How societal conflict then shapes the society is dependent upon the mobilization of power resources by social actors. Implemented by the Chinese government, the SCS could be viewed as a structure to maintain societal stability. Conflict Theory has been implicit in historiography long before the notion of a social credit system ever took hold in modern society. Conflict Theory encompasses the organization of society, the behavior of people and groups, and the explanation behind why various societal structures emerge during specific time periods and in certain locations (Collins, R).

Conflict Theory contextualizes the power inequality between the CCP and the Chinese people as the source of the conflict that has led to the development of the SCS system. Power in political systems is often a "zero-sum" commodity, meaning that "if one party gains it, somebody else must lose. Thus when the less powerful party seeks to increase its power potential, the more powerful party will resist these efforts" (Bartos, 2002, pg 31). The development of the Social Credit Score system is arguably the way in which the governing entity currently in charge, the

CCP, is ensuring its dominance. Conflict Theory enables the SCS to be viewed as an apparatus of societal control, utilized by those in power to remain in power.

It is due to technological advances that societies are entering the age of big data, which is making the establishment of SCS possible. The Chinese government's use of the SCS as a measure of societal control is creating a precedent for stratification, which is central to Conflict Theory and also central to governance under the CCP in China today. With such a massive populous, it is easy to understand why the Chinese government takes measures, such as implementing the SCS, to influence societal behavior to their benefit. The SCS is a tool to socially engineer behavior, rewarding those who obediently follow the rules and punishing those who do not. Citizens benefit from good behavior, and good behavior collectively helps maintain social harmony and stability, which in turn helps strengthen the legitimacy of the CCP and CCP leadership .

Conflict Theory also aids in viewing the SCS system from a comparative and historical perspective. Adaptable to novel circumstances, Conflict Theory helps to contextualize age-old human behaviors taking place in rapidly developing circumstances of the present day. For example, although the SCS is the most technologically advanced system that has ever been implemented in China, the conflict perspective is still relevant in analyzing the power struggle taking place. Conflict Theory typically anticipates the rise of future conflicts in society pertaining to the military, economics, organizations, and ideologies (Collins, R). The current circumstances surrounding the SCS system are no exception. For these reasons, Conflict Theory was the theoretical perspective chosen to help unpack and understand the sociological implications of the Social Credit Score system in the most holistic way possible.

III. THE SOCIAL CREDIT SCORE

THE SCS SYSTEM

The People's Republic of China is on track to implement a system for a Social Credit Score, or SCS, as a way to evaluate the "trustworthiness" of each of its 1.4 billion individual citizens. This system takes into account innumerable behaviors that can be judged to be either in the realm of "good" or "bad" by the standards of China's government officials. The system works by each citizen starting off with an initial allotted social score of 1,000, which is then scaled in a letter grading system. For example, a score ranging from 960 to 1,000 is considered to be an A; 850 to 955 a B; and 840 to 600 a C. Any score that falls below that scale is considered to be a D, designating the score-holder as an "untrustworthy" citizen. Social and financial behavior are thus accounted for and the cumulation of an individual's actions result in their personal social credit score (Kobie, N).

Some infractions are weighted more harshly than others and thus factor differently into the complex algorithm that produces one's social credit score. For example, if a person with an A or B score is convicted of drunk driving, their score automatically plummets to a C. With the range of scores ranging from an A+ to a D, this offense carries very serious consequences. Financial behaviors such as too much "frivolous spending" or bad behaviors, such as speeding, can also result in an individual's social credit score being penalized for actions deemed to be unfavorable by the Chinese government standards. Citizens who engage in inconsiderate behavior in public areas are subject to severe repercussions. For example, those who walk their dogs off leash can have their pets confiscated by government authorities and are required to take an exam in order to get them back. The consequences of a low social credit score can range from de-

creased access to education and housing loans to travel and transportation restrictions. Because the government encourages employers to consult the "blacklist" before hiring, citizens deemed to be "untrustworthy" due to a low credit score will effectively become second-class citizens, while the elite will have access to desirable social privileges. The benefits of having a high credit score for the individual Chinese citizen include perks such as discounts on utility bills or expedited government application privileges (Nittle, N).

Being "blacklisted" by the government is the result of either having an extremely low social credit score or having committed an act deemed to be "uncivilized behavior." There have been numerous cases in which Chinese citizens have been found, often to their surprise, to be on the "List of Dishonest Persons Subject to Enforcement by the Supreme People's Court" and been unable to purchase a plane ticket, or even banned from travel. This precise scenario happened to Liu Hu, a journalist in China who often wrote about censorship and government corruption. According to Lu, "there was no file, no police warrant, no official advance notification. They just cut me off from the things I was once entitled to." Furthermore, he divulged "what's really scary is there's nothing you can do about it. You can report to no one. You are stuck in the middle of nowhere" (Kobie, N). It is possible to be expunged from the blacklist, although it is not directly handled through the judicial system alone. An individual must pay their fine or appeal to the court in order to resolve the situation (Kobie, N). The blacklist in China has existed long before the idea of the SCS system and has typically been associated with individuals who pose a threat to the authority if the CCP. The SCS, however, allows for individuals to be relegated to the backlist due to a low social credit score, which can be influenced by the cumulation of minor or non-threatening infractions.

If the individual remains on the Blacklist, he or she is subject to be banned from taking airplanes or high-speed trains, buying real estate or lavishly decorating a home, going on tours and vacations, renting high-end office space, sending a child to private school, or buying premium insurance or wealth-management products. For serious offenders in some cities in China, an individual's personal ringtone is altered by the government in order to shame them into paying their debt and removing themselves from the blacklist. The typical phone ringtone is replaced by the announcement that, "the person you are calling has been listed as a discredited person by the local court. Please urge this person to fulfill his or her legal obligations" (Pak, J).

In the eastern Shandong province, the Chinese city of Jinan has recently rolled out a credit scoring system specifically to enforce responsible pet ownership. Since its inception, nearly 1430 pet owners have been penalized, with up to 120 of these having their pets confiscated altogether. Similar to the driver's license system of Australia, each registered dog owner will be allotted 12 points when entering the pet demerit system. Points will then be deducted as penalties for infractions or socially discouraged behavior. Losing all 12 points means losing one's pet. The amount of points deducted is dependent upon the specific circumstances. For example, if it is an owner's first offense for walking their dog off leash, or neglecting to pick up after their pet, only 3 points will be deducted. However, for second time offenders of the same violation would be fined up to 500 yuan and penalized 6 points for the infraction. For third time offenders, there are no more corrective actions. Instead, all points are automatically deducted from their dog registration and their pets are confiscated.

In some cases, if a pet owner is penalized, they will be required to take and pass an exam on dog-keeping in order to get their pet back. If a pet-owner fails to keep his or her pet registra-

tion up-to-date annually, they will have to take and pass an exam on dog-keeping regulations in order to maintain ownership of their pet. As a result, it has been reported that complaints about pet owners walking their dogs without a leash have dropped by at least 43 percent since the implementation of this pet credit system.

While the Social Credit Score system is still in development, it is being actively modeled on the results of small scale trial runs. Eight major Chinese companies have launched their own state-approved pilot projects that issue "social scores" for their users. One of the highest profile examples of these initiatives is Sesame Credit. As a financial wing of Alibaba, the world's biggest online shopping platform, Sesame Credit utilizes a data base of over 400 million users in order to construct individual social credit scores for each of them.

Data is key to the Social Credit Score system's success. For example with Sesame, one of the companies running a pilot project mentioned, it has access to the records of Alipay, Alibaba's mobile-payment app. Alipay is a third-party payment platform which boasts over 1,000,000,000 members. Because Sesame, has access to the user records, the company can see who has been the most brand loyal and reward them accordingly. Essentially, the structure is organized similarly to that of a "frequent-flyer" scheme, offering perks to those who buy into the system the most.

These independent pilot programs have now begun to merge and share information on their users in order to develop a larger, more encompassing social credit system. For example, China's largest match-making service, Baihe, has partnered with Sesame in order to promote their clients with favorable credit scores to potential significant others. Because users are encouraged to flaunt their scores on their social media or dating-site platforms, the concept that one's Social Credit Score is a private matter has been significantly diminished since its inception.

Sesame has even developed a mobile game in which users will guess if their online friends have better or worse credit scores than they do. With the information from Sesame, Baihe has been purposefully promoting clients with good credit scores in prominent places on its website (Hatton, C).

Sesame has not divulged everything that the company takes into account in order to create the "complex algorithm" that calculates an individual's credit score. It has been explained, from the company's spokeswoman Miranda Shek, that Sesame credit does indeed track the "financial and consumption activities of our users," however, "materials published on social media platforms do not affect our users' personal Sesame Credit score" (Campbell, C).

The Chinese government is watching these private credit systems carefully, as the Social Credit Score system that they intend to fully implement in 2020 will most likely resemble the pilot projects in many ways, especially in regard to the algorithms. The SCS will take every citizen into account by merging national databanks of information. However, people occupying certain professions, such as teachers, doctors, accountants, and journalists, will face particular scrutiny from the system.

Companies running these pilot projects continue to remind their users that, for now, this is a voluntary credit system and that they are freely joining the database by activating profiles. It is important to note though that online shopping for many Chinese is no matter a longer a question of convenience, but one of necessity. The private systems are undoubtedly conflated with those of the government in an attempt to keep tabs on the society at large (Hatton, C). Thus, China's SCS system is best conceptualized not as a single system, but as an overarching ideology and conglomerate of programs. The purpose is to utilize both punishments and rewards in order

to promote order and improve governance while simultaneously squelching disorder and fraud (Campbell, C).

THE ORIGIN AND GOVERNMENT CONVEYANCE

The Social Credit Score system, projected to be fully implemented in 2020, has been in various stages of development sine 2015. During this time period the Chinese economy, historically dominated by all cash transactions between friends and family, was far behind modern countries in its credit accountability infrastructure. This lack of reliable credit history for its citizens became glaringly evident as China rose from a position of collectivized economic poverty to that of the world's second largest national economy. The fact that only one in three Chinese people had a bank account in 2011 indicates the inevitability of the many issues that arose from the economy growing faster than the infrastructure of the credit-systems necessary to regulate it (Campbell, C). Because of this, there were few repercussions for Chinese citizens who defaulted on loans, sold counterfeit goods, or orchestrated shoddy business deals. This led to an increasing lack of certainty in both individuals and the economic transactions in which they were undertaking. In essence, the trustworthiness of each citizen was impossible to ascertain. This resulted in the low-level of trust in the Chinese marketplace (Campbell, C). It was vitally important during the rise of China's economy to correct this issue of trust. This need for structure presented a window of opportunity for the Chinese government to introduce the SCS system under the pretext that it would increase stability and accountability in society.

As President Xi Jinping seeks to fulfill the "China Dream" by increasing China's international sphere of influence, it is imperative that he is comfortable with the level of control he holds domestically. The Social Credit Score system will ascertain a certain level of predictability

that the Chinese government can reasonably expect from its citizens (Rolland, Nadège). One aspect of this pertains to ideological control, which has "markedly increased in recent years" in China (Rolland, 2020, pg 26). According to the NBR Special Report #83, China is "incrementally moving from an outsider and a reformer of the existing rules to becoming a leader that takes the initiative, controls the agenda, and sets its own rules and norms" (Rolland, 2020, pg 45). The implementation of the SCS exemplifies the ways in which China is experimenting with new forms of societal control and establishing the acceptance of new norms.

A system such as the SCS does not does not launch into full effect over night. The Chinese government must have a way to convey to its citizens that the SCS is active, their scores are live, and their actions are up for evaluation. It has been reported that public transport has had some role in imparting to Chinese citizens that their actions can directly affect their social credit score. Overhead announcements on the bullet train for example, convey to passengers that disorderly conduct will result in a personal score docking .

The actual text of the Chinese law regarding the SCS is somewhat difficult to ascertain, but the interviews from Chinese citizens indicate a common knowledge of the SCS and of its ongoing incorporation into the daily life of the average person. Generating awareness of such ubiquitous monitoring does not appear to be an issue within the major cities of China. Through the tactic of naming and shaming individuals, the Chinese government has been able to convey to its citizens, in no uncertain terms, the consequences of making the blacklist due to a low social credit score. A movie theater in the city of Lishui, Zhejiang province reportedly displayed the images of blacklisted individuals during the preview portion of a film. The names and faces of more than

300 people have been displayed at the theater and on public LED screens throughout the city as well (Koetse, M).

In May of 2019, government regulations on the Protection of the Rights and Interests of the Elderly were explicitly outlined in a Chinese article regarding the new Shanghai Municipal Regulations. It conveyed that individuals refusing to visit their elderly family members, the elderly could file a lawsuit to ask them to fulfill their obligations. "The court in Shanghai can also make relevant judgments based on the prosecution of the elderly, requiring the children to go home or visit the nursing home. If the parties refuse to execute this effective judgment, the relevant information will be included in the credit platform, which will have a certain impact on the parties' work and life" (Shanghai New Regulations). This message was also distributed on the Chinese Central Television channel for the greater Shanghai province to view (CCTV Net). In this way, the retirement agency provides a widely distributed incentive to urge family members to visit their elderly relatives, lest they face SCS repercussions.

V. ANALYSIS & EVALUATION

The SCS is an apparatus of control that generates socially engineered behavior through rewards and punishments. The new "normal" could be a state of significantly more repercussions to actions displeasing to the CCP and result in the tightening of control for personal freedoms and autonomy and an increased sense of stability for the Chinese government and the Party.

INCREASED AUTHORITY

The presidential two-term limit in the Chinese Constitution was changed in 2018 to allow Xi Jinping to continue at the helm of the Party and Chinese government and solidify the power

he has held since rising to the top of the Communist party in 2012. By working his way up through the ranks of officialdom, President Xi has cultivated alliances and positioned himself to be in power for years to come (Ramzy, A). As President Xi Jinping's power continues to grow, the carrot and stick model utilized by the SCS is concurrently positioned to increase the power that the government has in dictating the lives and actions of Chinese citizens. As President Xi Jinping seeks to fulfill the "China Dream" by increasing China's international sphere of influence, it is imperative that he solidify the level of control he holds domestically. The Social Credit Score system will ascertain a certain level of predictability and control that the Chinese government can reasonably expect from its citizens (Rolland, Nadège).

The SCS mirrors anti-corruption campaign put forth by President Xi. According to Dr. Rogier Creemers, a researcher in the law and governance of China at Leiden University, "President Xi's anti-corruption campaign was designed to regain the population's trust into local government," which happens to be the purported goal of the SCS as well (Creemer, R).

President Xi began his anti-corruption campaign in 2012 and the courts have since found over 1.5 million Chinese government officials guilty of some corruption related charge. By cleaning house and wiping out political foes, President Xi has been able to consolidate power very quickly. His anti-corruption campaign has been one of the most defining aspects of his presidency. It has been suggested that for President Xi, persecuting anti-corruption initiative was an all too convenient cover for both the rise in his power and its solidification. It was in March of 2018 that three specific votes in China's 13th National People's Congress, which hosts nearly 3000 delegates, were cast in favor of expanding President Xi's influence to unprecedented levels in the People's Republic of China. Not only was President Xi re-elected for a second term in of-

fice, but the presidential term limits were also done away with. Thus, President Xi's reign has the potential to continue for the entirety of his professional lifetime. The second major change to the constitution took place in the form of implementing the National Supervisory Commission, a new regulatory agency intended to centralized control over anti-corruption campaign resources. A trusted aid of President Xi, Yang Xiaodu, was appointed as the head of the agency. Because of their close relationship, it is suspected that President Xi's influence over the National Supervisory Commission will be all but absolute. As the new anti-corruption authority, the National Supervisory Commission is unconstrained by the Chinese law or government. Furthermore, the National Supervisory Commission has a higher status than China's Supreme Court and is only accountable to top party leaders, thus providing President Xi with even more power and influence through institutions of control (Fiol-Mahon, A). Because of this, SCS system is now positioned to be a tool at President Xi's disposal.

Through the publicity of the consequences of a low social credit score, generated by complex algorithms, the SCS has already had a significant impact on the people of China. Many agencies of authority know this and utilize the system to control the behavior of the population at large. It was reported by freelance journalist, James O'Malley, that overhead announcements on a bullet train headed from Beijing to Shanghai warned passengers to not misbehave or else their "behavior will be recorded in individual credit information system" (Ma, 2018). The announcement went on to say that in order to "avoid a negative record of personal credit" passengers were expected to "follow the relevant regulations" (Ma, 2018). The regulation violations were then listed as such behaviors as traveling without a ticket, smoking in public places, or other disorderly behavior, a subjective standard defined exclusively by the CCP. In conclusion, the announce-

ment urged the passengers once again to follow the rules of regulation and even to "help with the orders on the train and at the station" (Ma, 2018). James O'Malley recorded this situation and posted it to his twitter platform on October 29, 2018. Since this time, over a year ago, the Chinese have been consistently moving closer to the final implementation of a national Social Credit Score system which will enforce regulations and place value on individuals depending on their social credit score (Ma, 2018).

PUBLIC PERCEPTION

While many might make the argument that this type of enforcement limits individual freedom and autonomy, it is not to be criticized for its lack of effectiveness. Some citizens go as far to say that the system is making them better people already. A 32-year-old entrepreneur reportedly confided to a dispatch that he felt "like in the past six months, people's behavior has gotten better and better." The man, who only went by the name of Chen, added "when we drive, now we always stop in front of crosswalks. If you don't stop, you will lose your points. At first, we just worried about losing points, but now we got used to it" (Ma, 2018).

It seems fitting that the man who reported this information was from the town of Rongcheng, China. Rongcheng is a modern and quickly developing city at the eastern extremity of Shandong Province. As indicated by its suburban communities and broad streets, it has been said that Rongcheng was built with an eye for future expansion. After all the SCS has arisen out of China's economic expansion into the global market and the adaptations that such advancements required (Mistreanu, S).

With all the concern and skepticism in the air regarding the Social Credit Score system, it is important to consider public perception of the positive impact that the system could have on

the people and the People's Republic of China. Western countries tend to view the SCS in a negative light as a form of social control. However, it has also been argued that the SCS is a complicated system intended to focus primarily on financial and commercial behaviors, rather than political ones (Kobie, N). Chinese citizens have been reported to have a positive opinion on the emerging system. According to a 2018 study conducted at the University of Berlin by Genia Kostka, there is a surprisingly high degree of public approval of the SCS. The educated and elderly populations are reported to hold a more positive opinion of the SCS system. While it would be reasonable to assume that this demographic would be more concerned over privacy implications, that was not the case. These citizens are actively interpreting the SCS through the lens of a benefit-generating system that ensures honest dealings in society, rather than one of privacy-violation. The way in which an individual views the SCS is largely dependent upon the socio-demographic factors from which they are classified. It was found that people between the ages of 30 and 50 were the most skeptical of enterprises involved in economic activities collecting data. Approval of the SCS tends to be higher in urban areas than rural ones. The study concluded by acknowledging that although the SCS is designed as state surveillance infrastructure, that purpose is not what initially comes to mind for Chinese citizens. It is conceivable that public opinion could shift as the SCS solidifies its influence on society, but for the moment it is well received by the citizens of the People's Republic of China (Kostka, G).

POLITICAL AND SOCIAL IMPLICATIONS

Research has concluded that algorithms, such as the one used to generate scores in the Chinese SCS system, have the potential to disproportionately bring down minorities' credit scores. People who tend to live in low-income areas are at significantly higher risk of having a

credit score that is detrimental to their economic outcomes. In the U.S. for example, factors such as race, gender, ethnicity, and social-class were once taken into account in order to generate an individual's credit score. Since then, this discriminatory practice has been outlawed by the Equal Credit Opportunity Act. Nevertheless, it serves as an example that using an individual's personal information in an algorithm could produce similar discriminatory results. With Conflict Theory in mind, it is important to be aware of how class divides can be perpetuated and replicated with a credit system (Waddell, K).

In fact, this is exactly what is happening with the SCS in regions of China with large minority Muslim groups. Chinese tech start-ups have built algorithms that the government is using to track Uighurs, particularly in the Xinjiang region. Vast surveillance networks are used to monitor many of the 11 million Uighurs who reside in China. Government entities, such as local police departments, are reportedly using facial recognition technology to scan faces and determine whether residents are Uighurs. In 2019, within the course of a single month, a system screened citizens over 500,000 times to keep tabs on the population of the minority Muslim group. The local law enforcement in the central province of Shaanxi aimed to acquire a smart camera system that "should support facial recognition to identify Uighur/non-Uighur attributes" (Mozur, 2019). Uighurs more often resemble people with facial features predominantly associated with Central Asia, distinguishing them from China's majority Han population. Such differences make it possible for facial recognition and A.I. software to accurately single them out. Clare Garvie, an associate at the Center on Privacy and Technology at Georgetown Law explains that "if you make a technology that can classify people by an ethnicity, someone will use it to repress that ethnicity" (Mozur, 2019). The A.I. companies that are responsible for creating this software in-

clude Yitu, Megvii, SenseTime, and CloudWalk, each worth an estimated one billion US dollars. Megvii reported that the company was focused on commercial, not political solutions. Regardless of their intentions, the software that these companies are producing is what makes the implementation of the SCS system possible. In a statement Megvii claims that it is "concerned about the well-being and safety of individual citizens, not about monitoring groups" (Mozur, 2019). Still, the externalities of monitoring software is dependent upon the way that it is used. The SCS is the first nationalized system that uses such advanced technology and the implications are sure to be felt in Chinese society.

According to Jing Zeng, a researcher at the University of Zurich, the Chinese Justice system uses toothless policy in lieu of genuine protection for its citizens. In essence, Zeng argues that there is an ever-present potential for abuse of power, stemming from the Chinese government's interpretation of laws. A program or policy, for example, can appear to be apolitical at the surface level, however, as soon as the CCP deems them to be political, they can be used for political purposes (Kobie, N). Viewed through the lens of Conflict Theory, the SCS has the potential to disenfranchise individual citizens and solidify the power of the government and its officials.

Another danger with the SCS that Zeng identified had to do with the idea of a "negative spiral." This concept looks at the social negative externalities that the SCS could create by exasperating class divides, or depending on their score, creating different classes of people. The major concern from the "negative spiral" is that once an individual falls into a category with a low social credit score, it could be very difficult to regain points. One of the punishments for a low score is to slow down government paperwork and the bureaucratic process for afflicted individuals. Thus, the system would continue to work to the disadvantage of those most marginalized by

it, squandering many people's potential for upward mobilization into higher SCS categories (Kobie, N).

Through the implementation of the Social Credit Score system, the Chinese are outwardly expressing their disdain for corruption and fraud. However, skeptics have been quick to point out the all too convenient and virtuous guise that the SCS portrays, while simultaneously stripping its citizens of autonomy and freedom. While cracking down on internal corruption, through the restriction of freedoms, one might wonder if China is as dedicated to the cause in relation to their external and foreign affairs. Based on their reputation for intellectual property theft, the answer is abundantly clear. It is not difficult for the case to be made that China has more on the agenda than simply ascertaining the trustworthiness of its citizens. I would argue, based on the evidence and projected repercussions of the SCS, that the Chinese government is more interested in having an air-tight grip on its citizens by socially engineering behavior and squelching dissonance.

These are the issues that raise the most concern. The silencing of speech, arrest of political dissidents, and the stripping of basic human freedoms based on a credit system are all serious issues that infringe on human rights. This is the reality of the situation currently at hand. It is not the crack down on drunk driving, it is the repercussions of the system and the punishments which carry enough weight to take any sort of restorative justice off the table for that individual. As previously stated, if a person with a score above a C is convicted with drunk driving, his or her score would automatically plummet to a C. Of course, drunk driving itself is very serious offense and every precaution should be taken to dissuade citizens in any country from making such a dangerous decision. However, the individual in China may not be able to recover from that deci-

sion with a C as their Social Credit Score. A low score will make other aspects of one's life harder. Their bills will not be discounted, their government documents will be processed slower, they might not even be able to buy a train ticket to get to and from work. It could quickly become a downward spiral of defeat. In a country that already struggles with the social mobility of its citizens and a long standing history of classism, the SCS is positioned to only exacerbate these issues (Mistreanu, S).

Social issues have often arisen as a result or a symptom of Credit systems. While China is in a particularly tough spot because they have incorporated social behaviors into their SCS, they are not the only country to deal with these issues. In America, minority and marginalized groups avoid seeking credit due to a history of discrimination. African Americans are less likely to seek credit due to decades of discrimination. However, the aversion to these institutions distances people of color from the very outlets they need to be able to thrive in the United States. Good credit is essential, as it can impact everything from mortgage rates to an employer's hiring decisions. Thus, the ramifications of avoiding credit institutions based on past perceived trauma can have very negative impacts on the trajectory of one's financial success. The results of an investigation produced by the National Fair Housing Alliance indicated that 60% of the time when an applicant, who was a person of color, was offered a car loan, it was higher-priced than those offered to their white counterparts. This alarming statistic still stands even when the person of color was more financially qualified (Yearwood, 2019).

This has been such a prevalent issue in America that legislation to combat it has been introduced as recently as May of 2019. The Loan Shark Prevention Act is designed to "combat the predatory lending practices of America's big banks and protect consumers already burdened with

exorbitant credit-card interest rates" (Yearwood, 2019). This will likely benefit consumers of color, as the legislation would cap interest rates at 15%.

People who have been oppressed by a system are now seeking to avoid it entirely. Unfortunately, this defensive behavior will only serve to be detrimental in the long-term. There is a longstanding debate as to if credit score algorithms are racially biased. It is impossible to make the argument, however, that one's credit score is entirely racially based. The vice president of scores and analytics at credit-scoring company FICO, Joanne Gaskin, says that the firm does not factor in "age, address, employment, income, gender or race" in the algorithm that generates scores (Yearwood, 2019). Ricki Lowitz, the chief executive officer at a Chicago-based nonprofit called Working Credit, has made it his mission to assist disenfranchised customers. He believes the best way to do this is to first help them overcome "their deep seated fear of credit." Lowitz confided that many of her clients, 80% of which are people of color, are often angry that they did not have all of the information on how a credit system operates. "We meet people who have been beaten down by the system," Lowitz said. "In some cases, we are contradicting their parents and grandparents who have told them to stay away" (Yearwood, 2019). Educating the public is perhaps the most important resource we have in the fight for equity. Credit Scores, in America have the potential to do as much good as harm. The disparity in education has caused more damage than the system itself. "The fact that race is not factored into the credit score is perhaps the greatest opportunity we have to help people of color level the playing field," Lowitz said (Yearwood, 2019).

While the credit system of America and the social credit score system of China do not mirror each other exactly, there are enough similarities between the two to draw comparisons. If

the credit system of the United States has been known to cause some issues involving the widening disparity between social and economic classes, the same occurrence could take place in China, especially considering the SCS incorporates social behaviors in addition to financial ones. Credit systems are not inherently discriminatory, but historically speaking they have the potential to cause much harm. They are, however, very necessary in today's modern age and market. China needs a financial credit system. As the world's second largest economy, and projected to soon be the first, it was imperative for the Chinese government to develop an accountability system to assure trustworthiness. It is not a question of why, but in what way the credit system will be implemented.

ECONOMIC IMPLICATIONS

The Social Credit Score system aims to build a real-time database to monitor not only individual, but corporate and government behavior as well (Koty, A. C). Thus, in addition to affecting the rights of individual citizens, the SCS is projected to significantly effect business in China. Although Beijing insists that the SCS is intended to develop a "fair, transparent, and predictable" business environment, skepticism has arisen that the motives are more complex. As the central government continues to consolidate power, data companies will likely be obligated to share more and more of their intellectual property. In light of the escalating tensions with the United States, concerns have arisen in the way the Chinese government might potentially use the data. It is projected that the SCS, which enables the Chinese government to reward individual behavior it approves of and punish what it does not, will bleed into the realm of business. The continually evolving databases of information will allow the government to monitor and track all business under the domain of the People's Republic of China. This will effectively and efficient-

ly streamline the institutions of control China seeks to impose upon the business sector. Such a concept is projected to more stringently enforce the way companies comply with the law, as well as raise the penalties for those implicated with partners involved with corrupt activity. Thus, the corporate world will be just as affected by the SCS as the individual. According to the EU Chamber and Sinolytics report, "higher scores can mean lower tax rates, better credit conditions, easier market access and more public procurement opportunities for companies. Lower scores lead to the opposite, and can even result in blacklisting" (Cheng, E). This system will be so scrupulous with detail that in some circumstances companies can be held liable for the actions of individual employees. Succinctly, an employee's personal SCS can affect the SCS of the business for which they work (Cheng, E).

In addition to concerns over how the SCS will affect Chinese businesses domestically, there is also reason to believe that the system could be used as a tool in the global trade war. In light of the escalating trade dispute between the United States and China, a system that has the potential to limit market access to foreign companies, such as the SCS has cause to be watched closely in the coming quarters. The implications could mean companies would be required to provide enormous amounts of data. Sinolytics CEO Bjorn Conrad commented that "it opens the opportunity to use the system in a fairly targeted way in the midst of a trade conflict" (Cheng, E). The emergence of a Social Credit Score system gives the Chinese government more insight through the databases of information available. This is made possible by requiring companies who do business in China to internally collect data and submit it to the government. The consequences of not abiding by these rules can now have a significantly negative impact on businesses because of the Social Credit Score system. Fear of the ramifications for violations will bend

businesses to the wishes and interests of the Chinese government. This reaches far beyond the traditional parameters used to evaluate a company's "trustworthiness" for the business's ratings (Cheng, E).

When I personally interviewed him, Gary Giles, as the prior Vice President of Far East Operation of the Juice Plus Company, weighed in on the issue in relation to the business he conducted in China over the past decade. At one point in his career, Giles would visit China every 30 days. The frequency of his travels was eventually dialed back to at least three times a year. Giles primarily worked in Beijing, but also had business in Shanghai and Xian. A decade ago Giles had a business venture involved with a fruit and vegetable juice powder product. This product was to be made in US with some stages of production taking place in China. Giles also worked with one of the largest mothers and children care nutrition and wellness company, Baoying, which translates to BabyCare.

When asked if he perceived that Chinese citizens were wary of repercussions for their actions that might be viewed negatively, Gary replied "do you mean are they afraid of their national government? I didn't see it but I don't know if they know any better." He then added, "The key to the Chinese is that they want to be respected. They work a six day week, they work hard and all they want is respect and also what we have, which is an incredible lifestyle." I prodded more deeply and asked Giles if he had experienced any surveillance during his business meetings that would possibly affect the course of conversation between him and the Chinese businessmen with which he was negotiating. Giles responded, "Surveillance? No. But I believe they have a proclivity towards theft of intellectual property. They put themselves in a position to know things about people." Giles did not hear anything in business dealings about a social credit score system

and did not perceive it to be a decision making factor for the Chinese business men in the deals he was conducting.

This notion is right in line with that of the allowances associated with economic reform and growth since the Mao Era. One of Deng Xiaoping's famous sayings fleshes out this idea. It goes as such, "it doesn't matter whether a cat is black or white, as long as it catches mice" (Buckle, M). In essence, the growth of the economy has been placed at the forefront of China's agenda and, as long as insubordination to the CCP does not occur, allowances for many different forms of economic growth are made. This includes Gary Giles's business ventures. For example, when I asked about the Firewall, he answered, "it is interesting, the wall is actually not nearly as strong in the Western Hotels I could access CNN in the FourSeasons which I could not if I walked out on the streets." When asked why, Giles added "The firewall is weakened to appease the traveling business executives, the firewall outside in the city is to control behavior." This led Giles to lament that, from his experience, "a big issue in China is counterfeiting, my product has many anti-counterfeiting measures attached to the product so that it can be trusted to be authentic." He adds the lack of accountability has led to "pure economic incentive, the possibility of profit is too much to say no too." Giles then remarked that, "this could be one of the very reasons that the Chinese government is implementing such a system as the SCS. This attempt to shut down on counterfeiting and fraud is indicative that they have a real problem with this." To wrap up the interview, I concluded with the question that deeply intrigued me. I asked him, "In addition to its benefits, could the SCS be an all too convenient cover-up to control behavior while looking like the good guys?" Gary Giles looked up, "Yes."

PERSONAL EXPERIENCE

So how can a Social Credit Score system truly operate? Facial technology has allowed for the tracking and constant surveillance of individuals in areas where it is active. When I was in Beijing in the summer of 2018, I noticed security cameras on almost every corner. In the shopping malls and markets, they were prevalent as well. One example of facial recognition technology that I personally experienced first-hand was in the public bathrooms inside the shopping malls that we visited. The example that I most vividly recall took place in the Pearl Market. Upon entering the restroom, each individual was prompted to interact with a kiosk implanted in the wall. This kiosk had a camera that captured one's image, typically shoulders up, and projected it onto the screen. I found myself looking at a computer generated, real-time image of myself. This image was then quickly, yet scrupulously, recorded by the device. Markers of the distinct qualities of my face where identified, such as my brows, eyes, nose, and jaw. Once being facially scanned and recorded, I was dispensed a few sheets of toilet paper. For the sake of experimentation, I came back a short time later. The kiosk went through the same process, yet this time it identified me as a recent user. A message was projected upon the screen in Chinese characters, but a small English translation was below. It read something along the lines of "user disabled for 30 minutes" with a count-down clock indicating how much more time that I must wait before I was eligible to receive any more toilet paper from the machine in the public restroom. I took a step back and watched as my image in the screen did the same until I no longer appeared before it. Fascinated and slightly unnerved, I decided to hang back and observe. A Chinese woman approached the kiosk next, in a similar fashion the machine scanned her image, facially-recognized

her, and dispensed the allotted amount of toilet paper. This appeared to be normal to her as there was no hesitation or look of uncertainty in her demeanor.

This was perhaps the most fascinating aspect of the entire experience to me. It was not the fact that this technology existed, it was the way in which it was so widely accepted. For many citizens in the People's Republic of China, being monitored, surveyed, and recorded is not necessarily a cause for concern. While we are equipped with the same advanced technology, the perception of how it may be appropriately employed is very different in the United States (Sturmer, J). In China, facial recognition systems are able to track an individual across an entire city. In 2017, Chinese officials presented their technology while working with BBC News. In under seven minutes, a journalist who was sent out into the city was located among the throngs of pedestrians. This was possible through facial recognition technology paired with the country's network of 170 million CCTV cameras (Kobie, N).

When in China, I was very interested in the degree to which social and economic mobility were achievable for the average Chinese citizen. Because a system, such as the Social Credit Score system is inherently harsher to citizens of lower socio-economic classes, it has been my intent to research its effects. A concern is that the SCS will more greatly benefit those in a privileged position, while simultaneously adding hurdles to those already struggling financially or socially. Thus, there is reason to believe that the SCS will limit social and economic mobility for Chinese citizens. Credit systems in general have proven this to be true. We can find examples in the United States of the credit system unfairly treating specific groups of people. However, the one that China is implementing is even more alarming than the ones that we have previously been exposed to because of the fact that it not only takes into account financial behaviors, but

social behaviors as well. By analyzing people's social connections, new ways to discriminate against them have arisen. Algorithms can bring down credit scores quickly, particularly those of marginalized or minority groups. Behaviors that are not necessarily illegal, yet still discouraged by the government, are positioned to seriously limit an individual's autonomy. However, preventing this type of discrimination is not the purported goal of the Social Credit Score system. The goal is to ascertain the trustworthiness of each citizen by socially engineering behavior with a system of punishments and rewards. It happens to be the case that the privileged are in a better position to benefit from the SCS and the marginalized are more likely to be unable to do so to the same degree (Waddell, K).

V. CONCLUSION

In conclusion, the Social Credit Score system of China is a rapidly developing, digital concept that seeks to ascertain the trustworthiness of individual citizens. While parts of the SCS are not novel, the comprehensive whole of the system is something the world has not yet seen. From complex algorithms to facial recognition technology, the SCS is a tool that has emerged from the advanced placement of our society. In the "big data" age, it is unclear to what extent the limits of the externalities from the SCS may be. As the system continues to be fully implemented across China, it will be interesting to watch the development of the controls pertaining to both social and economic behavior. Many other countries around the world have similar access to their citizens' private information. Facial recognition technology, targeted adds, financial records, and personalized algorithms are available globally. It is the manner in which this "big data" is

being used in China that specifically distinguishes China from other countries that have access to personal data.

The Chinese government's role of data recording has had a positive impact in controlling the spread of COVID-19. Based on personal data, such as recorded travel, hotel stays or WeChat pay, the Chinese government has been able to identify individuals who have been exposed to the virus, follow the trail of those individuals, and enforce quarantine of those in contact or impacted. These measures so far have helped to effectively control the spread of COVID-19 within China and illustrated the way in which society, as a whole, could benefit from a social credit score system in a pandemic crisis.

The implementation of the SCS is an apparatus of societal control that can be contextualized through the conflict perspective. While Conflict Theory helps us view China's actions as a measure to ensure the stability of its government, it also conveys that the SCS is a tool used by those in power to squelch social and political dissidents. The externalities that could result from the implementation of the Social Credit Score system should be considered seriously. Even in its infancy, the SCS is capable of major societal effects. I would anticipate a stricter enforcement against actions that criticize the CCP. I believe the Chinese government will be able to wield even greater control over its citizens as the SCS becomes a normal and accepted part of life in China. Some Chinese citizens will benefit from the SCS, and some will certainly face the penalties that come with a low score. Regardless, I anticipate that the SCS will play a role in nearly every aspect of the social behaviors and financial decisions that the majority of Chinese make on a daily basis.

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