

THE ROUTLEDGE HANDBOOK OF PRIVACY AND SOCIAL MEDIA

Edited by Sabine Trepte and Philipp K. Masur

First published 2023

ISBN: 978-1-032-11161-2 (hbk)

ISBN: 978-1-003-24467-7 (ebk)

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DOI: 10.4324/9781003244677-26

The funder for this chapter is Bavarian Research Institute for
Digital Transformation (bidt).



Routledge
Taylor & Francis Group
NEW YORK AND LONDON

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In 2014, the Chinese government launched the implementation of the Social Credit System (SCS), following the release of *The Planning Outline for Building a Social Credit System (2014–2020)* (hereinafter, *Planning Outline*; State Council China, 2014). The SCS has received significant global attention since the beginning, and there is now a fierce public debate about the system's nature. From one perspective, the SCS has been characterized as a mass surveillance apparatus to calculate a digital “sincerity score” for each resident based on a wide range of personal data (Campbell, 2019; Ma, 2018; Mistreanu, 2018). This perspective describes the SCS as a “privacy nightmare” and a threat to human rights, particularly due to the country's weak law enforcement in the context of privacy (Y.-J. Chen et al., 2018; Mosher, 2019; Vinayak, 2019). Another group of scholars views the SCS as primarily a centralized collection of administrative data based on various regulations that have little to do with surveillance or comprehensive credit scoring (Daum, 2018, 2019; Horsley, 2018). Given this context, we will first introduce key elements of the SCS before delving into the system's privacy concerns.

What Is the Social Credit System?

According to the *Planning Outline*, the goal of the SCS is to “allow the trustworthy to roam everywhere under heaven while making it hard for the discredited to take a single step.” Multiple social and economic reasons drive the implementation of the SCS. First, moral decline has emerged as a major social problem in Chinese society (Ipsos Public Affairs, 2017). According to a 2013 national survey, one of the most pressing concerns among urban residents was degenerating social trust (Ma & Christensen, 2019). Second, in the economic realm, Chinese enterprises suffer from an estimated loss of 600 billion RMB (approximately 92 billion USD) per year as a result of dishonest activities.¹ Third, as China tries to boost its domestic economy, the SCS is expected to give access to credit and investment opportunities for millions of Chinese citizens without financial records in the domestic market. Finally, China's rapid development of digital financial trading and commerce accelerates SCS implementation by digital tracking and evaluating individuals' (as well as other entities') economic and social behavior.

The SCS, which is the first national digitally implemented sociotechnical rating system, evaluates the “trustworthiness” of nearly all types of social entities, including citizens, companies, social organizations, judicial organs, and governmental authorities (State Council China, 2014). The SCS

also covers foreign residents, companies, and organizations with activities in China, such as foreigners living in China and foreign companies doing business in China (Chen et al., 2021). These entities may be classified into “trustworthy” and “untrustworthy”² based on their economic and social behavior and are then subjected to various forms of reward and punishment. Individuals who fail to comply with a court order (usually related to debt repayment) are the most frequently reported cases, and they are publicly displayed on a blacklist called “Dishonest Persons Subject to Enforcement.” Blacklisted individuals are, for example, banned from using flights and high-speed trains. In contrast, a company that is rated as an A-level taxpayer by the State Taxation Administration enjoys, for example, priority in cargo declarations provided by the General Administration of Customs. However, the majority of Chinese citizens and companies are not on any list as they exhibited neither particularly “trustworthy” nor “untrustworthy” behavior. In general, negative records result in exclusion from material resources and reputational loss, whereas positive records result in both material gains and reputational praise. The SCS is led by the National Development and Reform Commission and the People’s Bank of China (PBoC) and is implemented by many institutes together. However, a unified structure of the SCS is hardly discernible regarding its implementation. At a high level, one can identify a commercial branch of the SCS apart from the government-run SCS. We discuss both in more detail in the following.

The government-run SCS is mandatory and employs two main interrelated mechanisms: the blacklisting and redlisting mechanism and the joint punishment and reward mechanism. Blacklist and redlist records showcase untrustworthy and trustworthy behaviors, respectively, and are published online and offline with free public access. These lists are developed by various government agencies to rate individuals, companies, and other social organizations, and they include personal information, such as a name and a partially anonymized ID number. Although the SCS may seem like a radical social move, blacklisting and redlisting are familiar modes of public shaming and praising to the Chinese. As early as kindergarten, children receive praise and blame from the so-called “honor roll” and “critique roll.” These “rolls” typically present photos of individuals on banners at the entrance of buildings like hospitals, schools, and companies. It is not straightforward to find comparable programs, but in Western countries, various incentive strategies with and without monetary payments are used, such as appreciative badges and Employee-of-the-Month recognition rewards. In comparison, an approach like the “critique rolls” is even less common in Western societies. The current SCS implementation incorporates these culturally familiar principles into a digital sociotechnical system (Chen et al., 2022). Adding to such reputation mechanisms, different government authorities cooperate to enforce incentives and sanctions on listed entities through a joint punishment and reward mechanism. Untrustworthy or trustworthy behaviors in one context lead to punishment or rewards in a wide variety of contexts. The mechanism for joint punishment and reward is based on Memorandum of Understanding (MoU) documents signed jointly by different government authorities. There are now over 50 relevant MoUs.

The government-run SCS is established and realized at different levels. In Chinese policymaking, the provincial and city governments implement top-level policy documents, such as the SCS *Planning Outline*. At the city level, cities have developed various models for the SCS. Thus, several such SCS “prototype” cities currently test different scoring systems on a local scale. Take, for instance, Rongcheng, a city that has arguably received the most attention from SCS scholars. In Rongcheng, individuals, companies, and other social organizations automatically receive an initial 1,000 points from the local SCS government authority. Given the specifications of trustworthy and untrustworthy behavior determined by this local government, an entity may either gain points or lose points. As a result, entities are divided into six credit levels based on their scores: AAA, AA, A, B, C, and D. Other SCS prototype cities, such as Xiamen, Fuzhou, and Suqian, set credit scores for local residents with different scales. Higher credit scores are related to priority treatment and discounts for public services, such as book borrowing (up to 40 books) without deposits and discounts

on parking fees. Until now, more and more cities have been participating in such credit score experimentation. Whether any local scoring model will be implemented nationwide in the future remains unclear.

At the provincial level, the government-run SCS blacklists and redlists unfold in a highly diversified manner in terms of interface design and credit information comprehensiveness (Engelmann et al., 2021). Indeed, provincial governments have some leeway in how they want to set up digital reputation platforms with blacklists and redlists. An empirical study of 30 blacklist and redlist platforms found that each operated a unique web server with distinct front-end, back-end, and database designs (Engelmann et al., 2021). Furthermore, although some provinces (e.g., Beijing, Tianjin, Tibet, Guangdong, Hunan, Shanxi, and Qinghai) use more than ten different types of blacklists and redlists, others (e.g., Inner Mongolia, Ningxia, Gansu, Guizhou, and Hebei) implement only one blacklist and one redlist (Engelmann et al., 2021). The digital infrastructure that powers blacklists and redlists is also flexible. As a result, the digital reputation infrastructure of the state-run SCS branch may be a widely applicable regulatory measure because it can be quickly adapted to achieve novel policy goals at a relatively low cost. For example, shortly after the COVID-19 outbreak at the end of 2019, many provinces began issuing coronavirus-related blacklists and redlists to (among other things) respond to corona-related transgressions, such as selling counterfeit medical products (Engelmann et al., 2021).

In contrast, individual participation in the SCS's commercial branch is *voluntary*, but the information products of the commercial branch are used in many important contexts, such as apartment rental. Moreover, a few private companies are pioneering the commercial branch of the SCS. Eight private companies were granted permission to operate consumer credit services in 2015. After a two-year trial period, however, none of them received a license to continue providing consumer credit services. Instead, two newly established companies, namely, Baihang Credit and Pudao Credit, were granted consumer credit licenses. The eight private companies became shareholders in these licensed consumer credit reporting companies. Simultaneously, a few other companies somehow continued their previously developed services. Credit scores provided by these companies have different scales and are calculated along various dimensions (Chen & Grossklags, 2020). For example, Zhima (or “Sesame”) Credit was developed by Alibaba subsidiary Ant Financial. The Zhima Credit score is calculated on a scale of 350–950 points and is based on information from five categories: credit records, behavioral accumulation, proof of assets, proof of identity, and social relationships. According to the associated app, credit records are the most important metric for scoring. This category of data is comprised of two components: compliance behavior in commercial activities and court records of enforcement. The behavioral accumulation category collects data from user activities, such as mobile payments, shopping, utility bill payment, credit card bill repayment, and charitable activities. The proof of assets category refers to data about users' assets in Alipay and asset information provided by users, including real estate properties and cars. Meanwhile, data that can be used to verify users' identities and work situations are referred to as proof of identity. Finally, social relationships are information about friend relationships that users have authorized.³ However, beyond the general description, the specific algorithms that operationalize the credit scoring remain unknown. These credit score providers commonly collaborate with other businesses to offer, for example, deposit-free electronic product rentals and shopping discounts to individuals with high credit scores (Chen & Grossklags, 2020). Regarding the commercial branch of the SCS, our discussion in this chapter focuses on individuals only. However, parts of the SCS's commercial branch are also focused on companies. Here private online platforms, such as Qichacha and Tianyancha, use sophisticated data collection methods and data analytics to offer various information (financial and nonfinancial) about companies with easy accessibility and at low cost.

The two branches of the SCS are not separate, but rather intertwined under a “broader policy umbrella” aimed at fostering trust (Ahmed, 2019). Private companies provide critical technical

support for SCS construction, and data flows between the two branches. For example, in 2016, Alibaba and the National Development and Reform Commission signed a memorandum to promote the establishment of the SCS in the field of commerce, particularly in terms of data sharing and the joint punishment and reward mechanism. Simultaneously, Zhima Credit collects justice and administrative information that could be used for credit evaluation, such as data from the List of Dishonest Persons Subject to Enforcement. Both branches raise privacy concerns.

Regulatory Issues of the Government-Run Social Credit System

As the core of the SCS, blacklists and redlists have a significant impact on Chinese society. A single blacklist, called the “List of Dishonest Persons Subject to Enforcement,” included 15.78 million people between 2013 and 2020, with an average increase of about 2 million each year.⁴ SCS blacklist and redlist designs enable public access to social credit information, however, to different degrees. Most SCS platforms display a selection of credit records and enable targeted queries. Some platforms show a selection of credit records on a single page with numbered page tabs that allow visitors to inspect a large amount of different credit records. These observations suggest that the Chinese SCS must strike a balance between public access to credit records, reputational display of credit records, and listed entities’ privacy interests. In addition to administrative information such as the publication date and issuing authority, blacklists and redlists reveal personal information like an individual’s full name, their partly anonymized ID card number, a unified social credit code (an SCS-specific identification number), and, in some cases, an explanation as to why an entity had been listed, such as failure to perform a legal obligation.

Blacklists and redlists are issued based on effective judicial and regulatory documents. Consider the most widely used blacklist in China today, the list of “Dishonest Persons Subject to Enforcement,” which is issued by courts at various levels. In many countries, courts typically make case-related information available online to the public. As such, SCS blacklists and redlists are in line with the global culture of open government and the trend of government and courts’ transformation from “primarily locally accessible records to records accessible online via the internet” (Conley et al., 2012). However, the SCS blacklists and redlists have a strong public shaming purpose and thus raise significant privacy concerns.

At a higher level, the legal and regulatory environment regarding the publication of personal information varies among countries (Krause et al., 2022). The Chinese legal and regulatory framework for privacy protection has long been regarded as weak and lagging (Cao, 2005; Han, 2017). A series of laws and regulations legitimized government surveillance in the name of public security and cybersecurity rather than regulating the government’s activities (Zhao & Feng, 2021). Additionally, law enforcement remains a challenge in China. For instance, according to the *Provisions of the Supreme People’s Court on the Publication of Judgments on the Internet by the People’s Courts*, personal information, such as home address, contact information, ID number, bank account number, health status, vehicle license plate number, and certificate number of movable and immovable properties, should be deleted from the documents (Supreme People’s Court, 2016). However, at the local level, courts from some cities disclose personal information on blacklists, including the detailed home address and an actual photo of the individual, which would be considered problematic under most privacy regulations and laws around the globe. Likewise, from the citizen perspective, empirical research shows that the blacklisting mechanism of the SCS is an issue from a privacy perspective, but to varying degrees (M. Chen & Grossklags, 2022). Despite recognized privacy concerns, it is not uncommon for the public to regard the blacklisting mechanism as an effective and even reasonable punishment (M. Chen & Grossklags, 2022).

Different from open government data in other fields, which mainly aim at increasing transparency of the government, the SCS blacklists and redlists serve as public mechanisms for shaming and

praising. We are taking the PACER system from the United States for comparison. It provides information about accessing and filing US federal court records electronically. PACER users must first create an account and pay for the service. The cost is approximately 10 cents per page with a flat fee of 3 USD per document, which is quite reasonable but still creates a barrier to public access. In contrast, access to online SCS blacklists and redlists is free and requires no registration. The Chinese government makes significant efforts to spread the SCS blacklists and redlists to a large population. To achieve this goal, it uses digital technologies and relies on digital media to spread information about the blacklists and redlists nationwide. Blacklist and redlist information is published not only on SCS-related websites but also in various outlets, such as news reports and social media. Moreover, individuals and companies on SCS blacklists and redlists are widely discussed in media reports in China.

Since 2017, the government has been regularly publishing role model narratives on the central SCS platform *creditchina.gov.cn*. These narratives tell stories of particularly “blameworthy” or “praiseworthy” ordinary Chinese citizens. The familiar and easy-to-follow format of the narratives effectively communicates SCS-specific social norms and familiarizes readers with SCS surveillance instruments and enforcement strategies (M. Chen et al., 2022). As a result, role model narratives on *creditchina.gov.cn* instill a sense of “folk morality,” demonstrating, partly empirically grounded and partly fictionally, how individuals adhere to social norms, how they violate them, and the consequences they face. Although “blameworthy” role model narratives typically include the protagonists’ family name and hometown, “praiseworthy” ones include the protagonists’ full name and their gender, age, occupation, and hometown (M. Chen et al., 2022; Engelmann et al., 2019). Again, the SCS weighs the release of individuals’ personal information against the public’s interest, with little possibility for individuals to contest such use of their data.

Data collection, sharing, and disclosure are the basis for the wide broadcasting of the SCS blacklists and redlists. They are also a prerequisite for implementing the joint punishment and reward mechanism. In particular, data sharing occurs between different government authorities and between government authorities and commercial companies. This is in line with the global trend of expanding systematic government access to private-sector data (Cate et al., 2012). According to *The Action Outline Promoting the Development of Big Data*, promoting public data sharing and eliminating information silos are also high-level government tasks (State Council, 2015). It is argued that practical societal advantages of sharing data exist from the economic and social control perspectives. However, large-scale data sharing raises serious privacy concerns, particularly because data related to individuals’ credit, such as financial data, are typically sensitive. At the moment, which types of personal data are shared between organizations and in what ways remain unclear.

Privacy Policies of the Chinese Consumer Credit Reporting Companies

China’s commercial consumer credit reporting system has evolved rapidly over the last few years. One can observe considerable changes regarding the market players. Several companies, such as Wanda Credit and Koala Credit, have ended their services entirely. A few other companies have terminated their consumer credit reporting services and focus exclusively on corporate credit reporting, such as China Chengxin Credit and Qianhai Credit. Finally, some newcomers to consumer credit reporting, such as Pudaao Credit, have emerged. A few companies continue their services in this area, such as Pengyuan Credit and Zhima Credit, but with some adjustments. However, such adjustments are not immediately clear to users. In other words, from the user’s perspective, the difference between the service companies provided in previous years and the current year is difficult to notice.

Nowadays, Chinese individuals commonly use their commercial credit scores (e.g., Zhima scores) in various areas, such as car rental, booking hotel accommodation, dating, online shopping, and visa application. Both credit scoring and related service provision rely on large-scale personal

data collection, processing, and sharing. Particularly relevant to consumer credit reporting services is sensitive personal data, which, according to the *Information Technology Personal Information Security Specification*, refers to information that may cause harm to persons or property, reputation, physical and psychological health, or discriminatory treatment once disclosed, illegally provided, or abused. As a result, privacy protection is especially important in this field.

Privacy policies are a direct and important means for examining companies' privacy practices. An examination of consumer credit reporting companies' privacy policies in China reveals relatively weak privacy protection in the commercial branch of the SCS, which can be discussed from three perspectives. First, a privacy policy should be easily accessible to users; otherwise, the content of the policy is less meaningful. The *Personal Information Security Specification* not only includes broad, innovative, and detailed definitions and requirements on various aspects of data protection, but it also requires the personal data controller to develop an easily accessible privacy policy with specific content requirements. However, a privacy policy is not available for all consumer credit reporting companies in China. For instance, we could not find such a document for Sinoway Credit as of June 2022.

Second, the scope of data collection for commercial consumer credit reporting companies in China and those in other countries such as the United States is similar, including identity information, financial information, contact information, information about online activity, and device information (M. Chen & Grossklags, 2020). However, the privacy policies of Chinese companies are generally less detailed. For instance, companies frequently collect biometric information, such as facial images or videos, for identity authentication. Meanwhile, some companies, such as Tianxia Xinyong, explicitly stated that they do not save users' facial recognition characteristics, only the authentication result. For others, however, the statement is somewhat ambiguous. For example, JD Finance and Baihang Credit only demonstrate that they require the user's facial images/videos or facial recognition information for identity authentication or to confirm the accuracy of the information. However, whether such information will be stored is unclear. Another example is data retention. Negative information, which refers to information that "has negative impacts on the entity's credit status" (*Regulation on the Administration of the Credit Reporting Industry*), is an important part in the evaluation of one's creditworthiness; however, it is also very sensitive. According to the same regulation, any negative information record(s) will be kept for five years after the "bad" behavior has ended and then deleted. However, Zhima Credit is the only company that explicitly states the measures to deal with users' negative information records, whereas others discuss personal information retention in general without specifying the measures for negative information.

Third, according to some privacy policies, consumer credit reporting companies may collect, use, share, and disclose personal information to provide products and services and protect personal information. It is also common to provide anonymized statistics about personal data to third parties for marketing and advertising purposes. Moreover, some other commonly cited reasons for companies to collect, use, share, and disclose personal information are "required by regulations, rules and laws, or by government organizations," "public security, public health, vital public interests," and "safeguarding the life, properties and other material interest." JD Finance also includes the category of "academic research" but only when personal information in publications is deidentified. Users' authorization is usually not required to serve these special purposes. From this perspective, the commercial branch of the SCS extends the government's access to the private-sector's data, which allows for "systematic governmental access, disclosure, retention, and collection of information for surveillance, national security, and crime detection" (Abraham & Hickok, 2012).

The Role of Social Media

The Chinese government has the tradition of using the media for setting the agenda for political discourse, the promotion of public policies, and the monitoring of the public opinion (Tang & Iyengar, 2011;

Winfield & Peng, 2005). The infrastructure of Chinese media has become increasingly digitized and commercialized during the past decades. During this process, the Chinese government has adjusted its media strategy accordingly to act more indirectly but retained strong control over the media (Pan, 2017). Social media is used as an important channel in the context of the SCS to broaden the scope of broadcasting details about the SCS blacklists, and thus to broaden the range of the potential impact of shaming. Some local SCS platforms (for example, those in Inner Mongolia and Shandong) include a share function, allowing users to share blacklist and redlist entries directly through popular Chinese social media platforms (e.g., WeChat, Sina Weibo, and Baidu Tieba). As a result, individuals who are blacklisted are tried and judged not only in traditional courts, but also in the “court of public opinion” for public scrutiny (Greer & McLaughlin, 2011), whereas those who are redlisted may be publicly praised. According to this viewpoint, the media plays a role that is beyond the capabilities of formal institutional authority (Machado & Santos, 2009) and serves as a strong complement to it in the case of the SCS.

Additionally, social media is also used to make message delivery more target-oriented. For example, the Higher People’s Court of Hebei Province developed a mini program called “Lao Lai Map” on WeChat, which is a popular multipurpose social media service in China, to pinpoint users’ location and to scan a radius of 500m for “untrustworthy” people. Users can directly share any results on WeChat or report a new “Lao Lai” via the mini program. The color of the map changes from blue to yellow to red as the number of “Lao Lai” increases to raise attention further. What’s more, some local courts and telephone companies work together to alert phone callers to an individual’s “untrustworthy” behavior before the line is connected. Through these measures, the public shaming and praising mechanism functions are further enhanced within a small and connected community.

At a high level, the *Planning Outline* emphasizes credit construction in the area of internet applications and services, according to which internet users’ online behavior will be evaluated and the corresponding credit level will be recorded. It remains unclear how broadly the SCS collects personal data from social media platforms and what the related impacts are on the use of social media in China. However, some pieces of evidence show that individuals’ activities on social media are connected to and used by the SCS. For example, in one news report from the SCS national platform,⁵ the protagonist failed to repay a large sum of debt (about 4.5 million USD) and claimed to be unable to perform the obligation. However, she shared her luxury life frequently on social media, which was used as evidence by the court to prove her capability for debt repayment. In another case, the “Lao Lai” hid herself for more than one year but was then caught on the basis of the positioning function of WeChat.⁶ Recently, in October 2021, the *Provisions on the Management of Internet User Account Name Information (Draft for Solicitation of Comments)* were issued, making online platforms responsible for the authentication of users’ true identity information, including the Unified Social Credit Code. More broadly, the emergence and popularity of social media have generated a complex impact on Chinese society. On the one hand, it empowered the public and diminished the state’s ability to set the public agenda and shape political references, thus triggering a change in Chinese political communication (Esarey & Xiao, 2011). On the other hand, the government’s control and intervention activities clearly extend to social media (Sparks et al., 2016) which is, simultaneously, used by the government as a new tool for social control.

Discussion and Conclusion

The SCS, as a rapidly evolving social crediting system, is a critical example of societal transformation, but it also raises significant privacy concerns. This problem space is discussed from three perspectives in this chapter. First, as a critical mechanism of the SCS, the SCS blacklists and redlists “function” most effectively when more detailed information is provided and widely disseminated. Therefore,

the SCS is faced with a dilemma between effectiveness and privacy protection (M. Chen & Grossklags, 2022). Even when people's personal information is only partially disclosed, as is currently the case with the Enforcement Information Public Website (<http://zxgk.court.gov.cn/shixin/>), which is operated by the Supreme Court to publish the blacklist for Dishonest Persons Subject to Enforcement, it is often easy to reidentify a specific person. Therefore, it is a great potential threat to an individual's privacy and security.

Second, the SCS framework improves data flows from the private sector to the government, which is becoming more common in other countries (Abraham & Hickok, 2012). Aside from what is stated in the companies' privacy policies (about "special purposes"), collaboration between the government and private companies streamlines such data flows. For instance, Ant Financial, which operates Zhima Credit, has agreed to share consumer credit data with the PBoC (Yang, 2021). The shareholding structure of the two licensed consumer credit reporting companies presents a similar situation. For example, the largest shareholder (with 36%) for the Baihang Credit is the National Internet Finance Association of China, which is strongly associated with the PBoC and the China Banking and Insurance Regulatory Commission. The eight private companies that offer trial consumer credit reporting services each take 8%. Additionally, data sharing between government departments, which is the basis for the implementation of the joint punishment and reward mechanism, is also problematic as the change of context for collecting and using data creates a challenge to ensure that existing rights and obligations are not affected (Nissenbaum, 2004).

Third, the legal environment in China for privacy protection is improving. In recent years, the Chinese government has issued a number of privacy-related laws and regulations, such as the *Cybersecurity Law* (2016) and *China's Personal Information Protection Law* (2021), which affect both domestic and multinational entities that process or use the personal information of Chinese citizens. Furthermore, *the Measures for the Administration of the Credit Reporting Business* (2021) focus specifically on data collection, processing, sharing, use, and disclosure in the credit reporting industry. In comparison to our previous findings (M. Chen & Grossklags, 2020), it is clear that companies' privacy practices have become more comprehensive to some extent. However, the SCS blacklists revealed by local courts, as well as reported scandals such as the one involving Pengyuan Credit, which was fined in 2020 for providing a consumer credit reporting service without a license, continue to shed light on a relatively weak legal system in this area, posing a significant challenge to privacy protection.

Finally, another privacy challenge pertains to the collection and analysis of public data on key SCS platforms for *research*. Recently, a growing body of research known as computational social sciences has demonstrated that analyzing open government data can significantly contribute to a better understanding of some of society's most pressing challenges regarding economic behavior, health, or policy implementation (Lazer et al., 2020). Given a lack of consistent regulations for web scraping, researchers should nonetheless adhere to the principles of ethical web crawling (Krotov & Silva, 2018). The SCS publishes credit records on blacklist and redlist data with the intent of public scrutiny. When data are made public and no application programming interface is offered, researchers are free to collect data. For researchers, whether SCS platforms specify robots.txt files that outline rules for data crawling and scraping should be investigated first before any data collection. Researchers should blur any identifiable data presented after publication. The Chinese SCS is already one of the world's largest digital reputation systems. Empirical research on its influence on society and how its technical realization progresses will be an invaluable contribution to understanding how large digital sociotechnical systems influence societies in authoritarian states. Here, research questions could address how the SCS changes society's concept of social trust that is increasingly shaped by a digital classification system providing real reputational and material benefits and sanctions.

Acknowledgments

We thank the editors of this volume for detailed comments on an earlier version of this work. Furthermore, we are grateful for funding support from the Bavarian Research Institute for Digital Transformation. The authors are solely responsible for the content of this publication.

Notes

- 1 Refer to <http://finance.people.com.cn/n/2014/0711/c1004-25267176.html> Last accessed on August 31, 2022 (in Chinese).
- 2 The authors use quotation marks to communicate a neutral standpoint toward SCS-specific normative concepts. In the remainder of the article, quotation marks will be omitted for readability.
- 3 The explanation of the five data categories is based on information from the app of Alipay. Last accessed on June 7, 2022.
- 4 The data are provided by The 2020 Risk Report on Dishonest Persons Subject to Enforcement issued by the Qichacha Data Research Institute. Recited from Sohu news: https://www.sohu.com/a/447341762_774283 Last accessed on August 31, 2022 (in Chinese).
- 5 See https://www.creditchina.gov.cn/home/dianxinganli1/201808/t20180803_122527.html Last accessed on August 31, 2022 (in Chinese).
- 6 See https://www.sohu.com/a/210413946_123753 Last accessed on August 31, 2022 (in Chinese).

References

- Abraham, S., & Hickok, E. (2012). Government access to private-sector data in India. *International Data Privacy Law*, 2(4), 302–315. <https://doi.org/10.1093/idpl/ips028>
- Ahmed, S. (2019). The messy truth about Social Credit. *LOGIC*. <https://logicmag.io/china/the-messy-truth-about-social-credit/> Last accessed on August 30, 2022.
- Campbell, C. (2019). How China is using “Social Credit Scores” to reward and punish its citizens. *Time*. <https://time.com/collection/davos-2019/5502592/china-social-creditscore/> Last accessed on August 30, 2022.
- Cao, J. (2005). Protecting the right to privacy in China. *Victoria University of Wellington Law Review*, 36(3), 645–664. <https://doi.org/10.26686/vuwlr.v36i3.5610>
- Cate, F. H., Dempsey, J. X., & Rubinstein, I. S. (2012). Systematic government access to private-sector data. *International Data Privacy Law*, 2(4), 195–199. <https://doi.org/10.1093/idpl/ips027>
- Chen, M., Bogner, K., Becheva, J., & Grossklags, J. (2021). The transparency of the Chinese Social Credit System from the perspective of German organizations. In *Proceedings of the 29th European Conference on Information Systems (ECIS)*. https://aisel.aisnet.org/ecis2021_rp/47/
- Chen, M., Engelmann, S., & Grossklags, J. (2022). Ordinary people as moral heroes and foes: Digital role model narratives propagate social norms in China’s Social Credit System. In *Proceedings of the 5th AAAI/ACM Conference on AI, Ethics, and Society (AIES)*, pp. 181–191. <https://doi.org/10.1145/3514094.3534180>
- Chen, M., & Grossklags, J. (2020). An analysis of the current state of the consumer credit reporting system in China. *Proceedings on Privacy Enhancing Technologies*, 2020(4), 89–110. <https://doi.org/10.2478/popets-2020-0064>
- Chen, M., & Grossklags, J. (2022). Social control in the digital transformation of society: A case study of the Chinese Social Credit System. *Social Sciences*, 11(6). <https://www.mdpi.com/2076-0760/11/6/229>
- Chen, Y.-J., Lin, C.-F., & Liu, H.-W. (2018). “Rule of Trust”: The power and perils of China’s Social Credit megaproject. *Columbia Journal of Asian Law*, 32(1), 1–37.
- Conley, A., Datta, A., Nissenbaum, H., & Sharma, D. (2012). Sustaining privacy and open justice in the transition to online court records: A multidisciplinary inquiry. *Maryland Law Review*, 71(3), 772–847.
- Daum, J. (2018). Social Credit overview podcast. *China Law Translate*. <https://www.chinalawtranslate.com/social-credit-overview-podcast/> Last accessed on August 30, 2022.
- Daum, J. (2019). Untrustworthy: Social Credit isn’t what you think it is. *Verfassungsblog*. <https://verfassungsblog.de/untrustworthy-social-credit-isnt-what-you-think-it-is/> Last accessed on August 30, 2022.
- Engelmann, S., Chen, M., Dang, L., & Grossklags, J. (2021). Blacklists and redlists in the Chinese Social Credit System: Diversity, flexibility, and comprehensiveness. In *Proceedings of the 4th AAAI/ACM Conference on AI, Ethics, and Society (AIES)*, pp. 78–88. <https://doi.org/10.1145/3461702.3462535>

- Engelmann, S., Chen, M., Fischer, F., Kao, C., & Grossklags, J. (2019). Clear sanctions, vague rewards: How China's Social Credit System currently defines "good" and "bad" behavior. In *Proceedings of the 2019 Conference on Fairness, Accountability, and Transparency (FAcT)*, pp. 69–78. <https://doi.org/10.1145/3287560.3287585>
- Esarey, A., & Xiao, Q. (2011). Digital communication and political change in China. *International Journal of Communication*, 5, 298–319.
- Greer, C., & McLaughlin, E. (2011). 'Trial by media': Policing, the 24–7 news media sphere and the 'politics of outrage.' *Theoretical Criminology*, 15(1), 23–46. <https://doi.org/10.1177/1362480610387461>
- Han, D. (2017). The market value of who we are: The flow of personal data and its regulation in China. *Media and Communication*, 5(2), 21–30. <https://doi.org/10.17645/MAC.V5I2.890>
- Horsley, J. (2018). China's Orwellian Social Credit Score isn't real. *Foreign Policy*. <https://foreignpolicy.com/2018/11/16/chinas-orwellian-social-credit-score-isnt-real/> Last accessed on August 30, 2022.
- Ipsos Public Affairs. (2017). What worries the world. *Ipsos Views* (2017).
- Krause, T., Chen, M., Wassermann, L., Fischer, D., & Grossklags, J. (2022). China's corporate credit reporting system: A comparison with the U.S. and Germany. *Regulation and Governance*. <https://doi.org/10.1111/rego.12491>
- Krotov, V., & Silva, L. (2018). Legality and ethics of web scraping. *Americas Conference on Information Systems 2018: Digital Disruption, AMCIS 2018*.
- Lazer, D. M. J., Pentland, A., Watts, D. J., Aral, S., Athey, S., Contractor, N., Freelon, D., Gonzalez-Bailon, S., King, G., Margetts, H., Nelson, A., Salganik, M. J., Strohmaier, M., Vespignani, A., & Wagner, C. (2020). Computational social science: Obstacles and opportunities. *Science*, 369(6507), 1060–1062. <https://doi.org/10.1126/science.aaz8170>
- Ma, A. (2018). China has started ranking citizens with a creepy "social credit" system — Here's what you can do wrong, and the embarrassing, demeaning ways they can punish you. *Business Insider*. <https://www.businessinsider.com/china-social-credit-system-punishments-and-rewards-explained-2018-4> Last accessed on August 30, 2022.
- Ma, L., & Christensen, T. (2019). Government trust, social trust, and citizens' risk concerns: Evidence from crisis management in China. *Public Performance and Management Review*, 42(2), 383–404. <https://doi.org/10.1080/15309576.2018.1464478>
- Machado, H., & Santos, F. (2009). The disappearance of Madeleine McCann: Public drama and trial by media in the Portuguese press. *Crime, Media, Culture*, 5(2), 146–167. <https://doi.org/10.1177/1741659009335691>
- Mistreanu, S. (2018). Life inside China's Social Credit laboratory. *Foreign Policy*. <https://foreignpolicy.com/2018/04/03/life-inside-chinas-social-credit-laboratory/> Last accessed on August 30, 2022.
- Mosher, S. W. (2019). China's new 'Social Credit System' is a dystopian nightmare. *New York Post*. <https://nypost.com/2019/05/18/chinas-new-social-credit-system-turns-orwells-1984-into-reality/> Last accessed on August 30, 2022.
- Nissenbaum, H. (2004). Privacy as contextual integrity. *Washington Law Review*, 79(1), 119–157.
- Pan, Y. (2017). Managed liberalization: Commercial media in the People's Republic of China. In A. Schiffrin (Ed.), *In the Service of Power: Media Capture and the Threat to Democracy*, 111–124. Center for International Media Assistance.
- Sparks, C., Wang, H., Huang, Y., Zhao, Y., Lu, N., & Wang, D. (2016). The impact of digital media on newspapers: Comparing responses in China and the United States. *Global Media and China*, 1(3), 186–207. <https://doi.org/10.1177/2059436416666385>
- State Council. (2015). *The Action Outline for Promoting the Development of Big Data*. (in Chinese).
- State Council. (2014). *Notice of the State Council on Issuing the Outline of the Plan for Building a Social Credit System (2014-2020)*. (in Chinese).
- Supreme People's Court. (2016). *Provisions of the Supreme People's Court on the Publication of Judgments on the Internet by the People's Courts*. (in Chinese).
- Tang, W., & Iyengar, S. (2011). The emerging media system in China: Implications for regime change. *Political Communication*, 28(3), 263–267. <https://doi.org/10.1080/10584609.2011.572446>
- Vinayak, V. (2019). *The Human Rights Implications of China's Social Credit System*. <https://ohrh.law.ox.ac.uk/the-human-rights-implications-of-chinas-social-credit-system/> Last accessed on August 30, 2022.
- Winfield, B. H., & Peng, Z. (2005). Market or party controls? Chinese media in transition. *Gazette*, 67(3), 255–270. <https://doi.org/10.1177/0016549205052228>
- Yang, J. (2021). Ant to fully share consumer credit data with China's Government. *The Wall Street Journal*. <https://www.wsj.com/articles/ant-to-fully-share-consumer-credit-data-with-chinas-government-11632310975>. Last accessed on February 28, 2023.
- Zhao, B., & Feng, Y. (2021). Mapping the development of China's data protection law: Major actors, core values, and shifting power relations. *Computer Law and Security Review*, 40. <https://doi.org/10.1016/j.clsr.2020.105498>