

UC Berkeley

UC Berkeley Electronic Theses and Dissertations

Title

State-Firm Co-production of China's Social Credit System

Permalink

<https://escholarship.org/uc/item/3t6314sm>

Author

Ahmed, Shazeda I

Publication Date

2022

Peer reviewed|Thesis/dissertation

State-Firm Co-production of China's Social Credit System

By

Shazeda I Ahmed

A dissertation submitted in partial satisfaction of the
requirements for the degree of

Doctor of Philosophy

in

Information Management and Systems

in the

Graduate Division

of the

University of California, Berkeley

Committee in charge:

Professor Steven Weber, Chair
Professor Marion Fourcade
Professor Chris Hoofnagle

Summer 2022

State-Firm Co-production of China's Social Credit System

Copyright 2022
by
Shazeda I Ahmed

Abstract

State-Firm Co-production of China's Social Credit System

by

Shazeda I Ahmed

Doctor of Philosophy in Information Management and Systems

University of California, Berkeley

Professor Steven Weber, Chair

Over the last eight years, China's government has implemented its social credit system, a project to eliminate societal behavior the state has deemed to be 'untrustworthy.' Actions spanning tax evasion, academic plagiarism, and food safety scandals, among a host of others, fall within this system's purview. The central government reduced these issues into an information asymmetry problem, positing that the appropriate response was to publish information about, shame, and penalize perpetrators. This in turn created market opportunities for the government to partner with both large and small Chinese tech firms who modified their platforms and crafted bespoke technological solutions to advance a state-defined vision of building social trust.

This dissertation investigates how Chinese tech firms collaborated with national and local government institutions to implement plans for the country's social credit system. It explicates how major tech companies differed from smaller tech firms in the roles taken on, strategic compliance, services provided, and benefits accrued when both types of companies partnered with the state. Using qualitative methods, this work draws on Dan Breznitz and Michael Murphree's framing of "structured uncertainty" to explain how tech companies navigated ill-defined policy goals and limited guidance from the state. Contrary to portrayals of the social credit system as a straightforward, top-down vision the state tasked tech companies with building, this research shows how the firms themselves had a hand in co-producing the system's infrastructure while balancing their own interests and perceived constraints.

The dissertation argues that major tech companies operated as what Chinese legal scholar Shen Kui terms "credit norm entrepreneurs" for having designed platform features that state institutions sought to replicate in rewarding citizens 'trustworthy'

behavior. It also provides a case study of how three large tech companies operating in the financial technology, ride-hailing, and food delivery sub-sectors developed at least four strategies for negotiating how their data was used in the social credit system. These included resisting orders from government bodies they deemed to be insufficiently authoritative, and experimenting with internal user rating systems to preemptively comply with impending laws. Moreover, rather than indiscriminately handing state institutions user data, companies developed strategies such as sharing aggregated data about ride-hailing passengers' unpaid debts, and designing narrowly tailored data-sharing channels for state monitoring of food safety incidents. Analysis of how an e-commerce firm and news app worked with courts across China to evaluate, penalize, and socially shame court judgment defaulters additionally demonstrates how state-firm partnerships created business opportunities for firms when giving them government-generated data.

Hundreds of smaller tech firms functioned as 'intermediaries' in the market for social credit technology. Through the government procurement process, they won contracts to build the hardware and software of province- and city-level databases and scoring platforms. Using structured uncertainty to their advantage, they filled gaps in local governments' knowledge through designing consultations, training sessions for local officials, and analysis and translation of social credit-related policy documents to educate the public. The combined effect of both types of firms' tightly scoped participation in building the social credit system reveals how the system's reliance on over-technological solutionism ultimately made it ineffective at its own purported goals of strengthening social trust.

In providing an assessment of the social credit system's outcomes, this dissertation argues that what began as an ambitious project to reshape citizens' behavior has ultimately amounted to a form of what political scientist Iza Ding refers to as "performative governance." The central government's narrative framing of social credit as an information asymmetry problem in need of technological solutions potentially diverted attention away from how the state and tech industry have eroded other forms of social trust in several of the same fields where tech companies provided rewards. This dynamic arises from "management-oriented governance," wherein the state defines citizens' needs without soliciting their input. It also extends Ding's theorization of performative governance in China as a tool that primarily low-resourced bureaucrats use to assuage, rather than fulfill, the public's demands. This research shows how higher-resourced Chinese courts as well as national and municipal government bodies partnered with technology firms to present a particular facade of good governance, yielding superficial returns on their efforts.

The dissertation concludes with reflections on how features of state-firm coproduction of the social credit system may inform similar initiatives to implement

technology for governance purposes. Government procurement of technology, the use of government-generated data in major tech firms, and the intermediary role of small tech firms are likely to recur in these projects. Understanding how tech companies and local governments have set boundaries on what they are willing to co-produce with the state can help forecast the effects technological governance will have in China, how these projects might infringe on civil liberties, and how Chinese law may by turns restrict what is implemented, and in other cases be subverted to serve emergent state objectives.

Dedicated to my grandmother, Rookmin (Irene) Sukhdeo, whose prediction that I would do a PhD at Berkeley came true. Her labor made it possible for me to live in the comfort of books and ideas from before I can even remember, and it raised three generations of our family. Even now, she provides for us. I am grateful for the example she set of the many forms that dedication to and care for one's community can take.

Contents

Acknowledgments

Chapter 1

Introduction	1
--------------	---

Chapter 2

The Social Life of Blacklists: How Courts Partnered with Tech Platforms to Create a New Infrastructure of Shame

Introduction	16
“Enforcement is difficult”	21
Alibaba as Enforcement Collaborator	23
Alibaba and the Courts	25
Targeted Public Shaming	27
Turning Citizens into Informants	32
Conclusion	39

Chapter 3

‘Credit Norm Producers’ Navigate Structured Uncertainty: The Strategic Compliance of Financial Technology, Ride-Hailing, and Food Delivery Companies	41
Conditions of Structured Uncertainty	42
‘Credit Norm Producers’ and the Positive Logic of Rewards	43
Ant Financial	43
Didi Chuxing	53
Meituan	59
Alliances Under Structured Uncertainty	65

Chapter 4

‘Intermediaries’ Sustain Credit Cities: How Local Governments and Small Tech Firms Co-design and Implement Scoring Systems

Introduction	75
Procurement Data and the Potential for Transparency	77
Deconstructing Credit Cities	84
More than Matchmakers: Perspectives from a Small Firm in the Market for Social Credit Infrastructure	95
Conclusion: Credit Cities as Vanity Projects	97

Chapter 5

Conclusions

100

Bibliography

106

Acknowledgments

Thank you to Steve Weber for your deep patience with me and honest feedback throughout my PhD journey. I learned so much from your model of traveling between academia, government, industry, and media to get your ideas across where they matter most. I hope to bring this truly interdisciplinary ethos into what comes next.

Thank you to Chris Hoofnagle for so many years of empathy and pragmatic guidance. I have lost count of how many times your advice and encouragement pulled me out of ruts when I really needed it! Marion Fourcade, I am honored that you championed me and my work from early on. Thank you so much for your insights and unwavering support.

Inessa Gelfenboym Lee, I owe you everything and more for carrying me to the end of this PhD. Your generosity is unparalleled.

To two professors who are never far from my mind: Paul Duguid and Abigail DeKosnik, you embody the kind of educator I hope to be. Your classrooms were transporting educational environments that forever changed how I thought about pedagogy. You both have immense talent for instantly transforming students' ideas into their best possible versions. It was amazing to witness and learn from this alchemy.

Throughout my PhD, I was enormously lucky to have my work supported at the University of Toronto's Citizen Lab, the Mercator Institute for China Studies, Upturn, Stanford University's Center for International Security and Cooperation and the Human-Centered AI Institute, New York University's AI Now Institute, and Princeton University's Center for Information Technology Policy. I am so thankful to all of my colleagues who made these experiences rigorous, rewarding, and fun.

In China, I thank my Fulbright hosts at Peking University for being so welcoming and supportive of my research in 2018-19. Professor Xin Dai, I am beyond grateful for your mentorship and the example you set as a researcher. Your boundless social energy and curiosity during our trip to Guizhou made an indelible impression on me. It was instructive to me to see the ease with which you connected to each person we met, treating everyone as an equal and an expert with valuable insights to share. To my silk dress club friends, thank you for making Beijing feel like home! Maggie Jackson, I live for the day you will be my president and am still trying to match your zeal for living an activity-packed life. Nothing will compare to coming back from my final interview trip in Suzhou to find that you baked me the best birthday cake I have ever had – and in our tiny toaster oven! Rachel Thompson, you saved my PhD at least twice. Thank you for all of your astute questions during my mock qualifying exam (after a rollicking night out!), for our Devon getaway (which has inspired me to plan future

writing retreats), and for being a fabulous feminist icon in all that you do. Haohao, my dearest canine friend: during the dreariest months of fieldwork, your sweet silliness kept me from descending into despair – thank you for making me laugh, giving me an excuse to brave the Beijing winter, and reminding me not to take anything too seriously. Yuan Yang, thank you for sharing your wisdom, your writing, your home, your friends, and your dog with me! I cherish our friendship and all of the playful daydreaming and scheming we get up to together. Someday soon, I hope we will be Haos-mates. (Awooooooh!)

Thank you to the doctors who came before me and shared their knowledge and experiences along the way: Stevie Bergman, La'Shaye Coble, Lee Kava, Ashwin Mathew, Pete Millwood, Sarah Van Wart, and Nantina Vgotnzas. Noura Howell, I constantly marvel at the balance you strike between strategy, artistry, and humility – you have all of this in spades and I am perpetually taking notes. Elaine Sedenberg, when I first started at the I School I immediately knew that you were the student I wanted to be the most like. I'm so fortunate that we became friends and that I continue to learn from your brilliance, professionalism, and humor all the time. Elizabeth Watkins, qualitative research queen: thank you for being an amazing colleague, peer mentor, and friend. Abby Coplin, you were like an fourth committee member for this dissertation and I have bottomless gratitude for your thoughtful suggestions on how to situate this work within STS research on China. I cannot wait for us to coauthor!

For the doctors-to-be whose work I cannot wait to share: Tom Barrett, Randi Heinrichs, Bertram Lang, Elizabeth Resor, Katharin Tai, and Max Wolpert, thank you all for your friendship and empathy.

There are so many friends who listened, reframed, and in countless other ways made these years brighter for me: thank you to KB Kinkel-Brinkmann, Max Chomet, Helen Diagama, and Graham Webster.

Mom and Dad, thank you for being patient through a long, complicated process that I know has been difficult to understand and explain. These were some of the most challenging years of our lives, and I appreciate you so much for never questioning my choice to pursue a PhD and all of its uncertainties.

To my muses, co-conspirators, and ride-or-dies (each of you is all three of these things): Melissa Parker, I owe you a lifetime of thanks for every phone call and venting session where you uplifted me throughout this PhD. I am forever in awe of all of your creative, empathetic solutions to my woes (academic and otherwise) over our half a lifetime of friendship. If you still want to do a PhD when you retire, I am more than happy to reciprocate! Vidushi Marda, I'm extraordinarily fortunate to know you, research and write with you, and to be your friend. I am thrilled to watch your star rise,

and will always support you no matter what. Xiaowei Wang, you are an absolute inspiration and give me new reasons to value our friendship every day. Over all those Friday evenings in your garden the first year of the pandemic, you taught me that the playful ideas we joked about for hours were where my passion projects were hiding. Without your warmth and encouragement I might never have made the leap toward trying to spin them into realities. On my hardest days, I am reinvigorated by the thought of what we can create together.

Anne Jonas and Max Curran, the best part of the entire PhD was growing and learning alongside you. This process could have been much lonelier and more painful without you there to remind me “It’s Not Just Me” (cue singing and dancing)! I can’t imagine grad school without our Zoom movie nights, treasure chest of inside jokes, and never-silent group chat. Thank you for visiting me during the fieldwork for this dissertation and letting me show you around Beijing, Shanghai, and Taipei. It meant so much for you to experience a part of the world that is dear to me, and for you to see up close what drives why I do this work. Here’s to more moments that make us the sickeningly cute Beloved Cohort, and to more road trip karaoke sessions and jungle adventures. Our friendship makes me a better person.

Chapter 1

Introduction

In 2014, China's State Council issued a Planning Outline for the Construction of a Social Credit System (2014-2020), a document that featured a sweeping set of goals for how to enhance social trust in China. Pervasive signs of low social trust eventually became wrapped up in ambitions the state had for wrongs such a social credit system could set right: tax evasion, environmental pollution, academic plagiarism, food safety scandals, and medical malpractice, among other infractions. From the beginning, policy language flattened this wide array of issues into an information asymmetry problem. If more data about 'trust-breakers' across society could be gathered and disseminated, the logic went, then those entities could be punished until they changed their behavior. State institutions such as courts held that public dissemination of these trust-breakers' information could enable 'trustworthy' people to avoid them. The framing of these trust issues as resolvable through information collection and distribution created an opening for information technology companies across the country to collaborate with the state in what I refer to as the co-production of the social credit system.

This dissertation investigates two aspects of the social credit system: 1) how tech firms worked with, and at times against, the state in technologically implementing social credit policies across China, and 2) the performative results these collaborative implementations ultimately achieved. What models of state-firm collaboration emerged as part of implementing social credit? What strategies did tech firms employ in negotiating how they partnered with the state to implement policy? What features of these models may be replicated across other similar state-firm collaborations? Prior research has focused on tech firms as simply acting on government orders, ignoring the many steps in between.

I use political scientists Dan Breznitz and Michael Murphree's framing of "structured uncertainty" to characterize the vague, multifarious demands a variety of state institutions—including the National Development and Reform Commission, the State Council, the People's Bank of China, and the Supreme People's Court—made of companies to aid in constructing the social credit system. Contrary to how it is portrayed in news media and academic literature, the state's concept of a social credit system was neither sharply defined nor clearly communicated to these firms, and structured uncertainty conveys how firms were self-directed in judging appropriate courses forward. What emerges is a picture of state-firm relations at a point before this system began to crystallize and then slowly fade from public interest in China and abroad, and a story that may explain some of the features of a social credit law if one were to someday pass in China. I am most interested in what the social credit case tells us about the future of such collaborations on what I call tech governance projects, or

methods of putting state policy into effect that rely on tech platforms' infrastructure and expertise to reach citizens in ways the state could not or would not do on its own.

In this dissertation, I differentiate between major tech firms (many of which are household names in China and have hundreds of millions of domestic users) and small tech firms who primarily contract with province- and city-level governments. I show how differences in both types of companies' responses to structured uncertainty influenced the ways they co-produced the social credit system with their government partners. Large tech companies became what Chinese legal scholar Shen Kui refers to as "credit norm producers" who shaped design, implementation, and data collection where they chose to be involved in social credit initiatives.¹ State institutions leading the development of the social credit system, such as the NDRC and State Council, took inspiration from the rewards schemes these tech firms had run for their users. In turn, these central government bodies sought to partner with the companies to make their discounted services or waived fees available as rewards for state-recognized 'trustworthy' behavior such as volunteer work. Yet these 'credit norm producers' were also wary of how compliance with state demands could affect their business operations. They employed strategies including noncompliance with orders from institutions they felt lacked sufficient authority, sharing aggregated rather than individual user data, and creating narrowly tailored platforms for government agencies to monitor their users' activity. By contrast, small firms embraced structured uncertainty, and positioned themselves as translators of social credit policy developments to local government officials. This helped them move beyond merely being vendors of hardware and software for cities and provinces, filling in the gaps for services large tech companies did not provide, such as consultation and training of local government employees in collaborating on projects that either governments or the companies themselves launched.

Finally, throughout the dissertation I look at how results of different technological interventions have led social credit to become an example of "performative governance," which political scientist Iza Ding describes as "the theatrical deployment of language, symbols, and gestures to foster an impression of good governance among citizens."² Although Ding frames performative governance as mainly applicable to street-level bureaucracies conducting small gestures to assume a facade of responding to public needs, the social credit system displays some of these characteristics using a lexicon of terms related to trust and integrity, narratives of judgment defaulters as malingers who burden all of society, and technology platforms that cooperate with the courts to induce shame in blacklisted people who are made to feel that their diminished social status is inescapable. These interventions appear to have failed to foster greater social trust in China, and may even have the opposite effect.

¹ Shen Kui identifies one of the state's motivations for taking such an approach: "Looking at the division of the state, market, and society, credit norm producers are not only limited to the government and the judiciary in the state's system of authority. [They] also include market subjects and social organizations, especially the market forces the state needs to rely on when promoting the social credit system." 沈崑 [Shen Kui]. "社会信用体系建设的法治之道" ["The Rule of Law Approach to the Construction of Social Credit System"]. 《中国法学》[China Legal Science 5]. (2019): 29, footnote 21.

² Ding, Iza. "Performative Governance." *World Politics* 72, no. 4. (2020): 525.

Yet the courts and other state institutions laud their cumulative effect, seeing them as having bolstered citizens' estimation of the government's legitimacy.

A brief history of social credit

The term "social credit" (社会信用) itself had been in use for at least two decades by 2014, and as legal scholar Jeremy Daum has clarified, in Mandarin it is more akin to the concept of "public trust" rather than to ideas around scoring or totalizing moral judgments that it has come to be associated with outside of China.³ Scholars have traced precursors back through personnel archive files from the Qing Dynasty, the personal dossier or dang'an (档案) system that began under Maoism and continues in a heavily curtailed manner today, and "citizen morality files" that some Chinese cities experimented with from 2009-2012.⁴ Over time, the idea of social credit became an amalgamation of concepts spanning traditional financial credit scoring as well as more nebulous concepts of morality and trust. Some scholars date this shift as starting in 2012, when responsibility for pursuing a social credit system passed hands from the central People's Bank of China to the National Development and Reform Commission.⁵

The Planning Outline proposed building trust through evaluations of individuals, businesses, legal institutions, and government. Individuals who have violated Chinese administrative law can be labeled as "judgment defaulters," and are subsequently added to court blacklists. Individuals and companies are issued a unique identifying numerical code known as a "unified social credit code" that make it possible for over four dozen Chinese government departments—spanning education, air and rail travel, taxes, and more—to communicate with one another about issuing joint punishments for blacklisted people.

Three narrative traps

Over the seven-year period this dissertation traces (2014-2021), myths about social credit dominated foreign discourse about and perceptions of it. Most writing about social credit contains some degree of misperceptions and errors, including my own initial work on the subject. At least three narrative traps typified early research about social credit outside of China: 1) the assumption that Chinese surveillance technologies would be used to achieve goals laid out in the State Council's social credit planning outline; 2) the distinction between "private social credit systems" and "public social credit systems"; and 3) glossing over the legal context that has both shaped core features of social credit as well as created boundaries within the system.

³ Daum, Jeremy. "China through a glass, darkly." China Law Translate. (2017). <http://www.chinaalawtranslate.com/seeing-chinese-social-credit-through-a-glass-darkly/?lang=en> 2017.

⁴ Jiang, Min. A brief prehistory of China's Social Credit System. Communication & the Public 5. (2020).

⁵ Knight, Adam. "Technologies of Risk and Discipline in China's Social Credit System." Chap. 9 In Law and the Party in China: Ideology and Organisation, edited by Rogier J. E. H. Creemers and Susan Trevaskes, p. 239. Cambridge, Cambridgeshire: Cambridge University Press, 2020.

From 2014-15, overseas news coverage of the newly announced plans to create a social credit system zeroed in on specific parts of the State Council planning document and speculated about their relationship with the sprawling state surveillance apparatus. None of these sources could demonstrate a clear link between surveillance technologies (face recognition cameras, automated license plate readers, etc.) and the state's vision for a social credit system. Nonetheless, the belief that the two would inevitably merge ran through journalistic narratives that academic literature heavily cited.⁶ I started researching the social credit system in 2016, and made one of the chief mistakes that has dogged much writing about social credit since: I took both English- and Chinese-language media coverage at face value, fusing details from both into one account.

As outlets such as legal analysis and translation website China Law Translate disentangled these two types of sources' claims, I started to course correct. I drew from Chinese primary and secondary sources first, then compared them to English-language coverage to see where fact patterns matched and where inconsistencies or outright hyperbole emerged. Despite this strategy, I and other researchers slipped into the second narrative trap: neatly slotting state-generated initiatives (e.g., city-level scoring systems) and private sector projects (e.g., Sesame Credit) into the binary of "public social credit" and "private social credit," respectively.⁷

This division is imprecise. My reference to large firms as 'credit norm producers' and smaller ones as 'intermediaries' lends a necessary gradation of difference to market actors shaping the social credit system. I reveal how private sector actors had a hand in designing so-called "public social credit," and vice versa for state actors in "private social credit." The state and the firm are too enmeshed with one another in the creation and functioning of social credit-related technology for the distinction described above to accurately map onto these platforms and programs. One of the consequences of the early framing of 'public' versus 'private' social credit systems is that foreign scholars' initial survey research may have conflated respondents' support for products like Sesame Credit with support for "private social credit."⁸ This circulated in later research as a finding that Chinese citizens generally support the social credit system.⁹

The third kind of narrative trap is one where outside observers extrapolate logics or objectives of a social credit-related practice that suggest concealment of secondary,

⁶ Botsman, Rachel. "Big data meets Big Brother as China moves to rate its citizens." *Wired*. October 21, 2017.

<https://www.wired.co.uk/article/chinese-government-social-credit-score-privacy-invasion>;

Hvistendahl, Mara. "Inside China's Vast New Experiment in Social Ranking." *Wired*. December 14, 2017.

<https://www.wired.com/story/age-of-social-credit/>.

⁷ Liang, Fan, and Yuchen Chen. "The making of 'good' citizens: China's Social Credit Systems and infrastructures of social quantification." *Policy Internet* 14, no.1. (2022): 115; Liu, Chuncheng. "Multiple Social Credit Systems in China." *Economic Sociology: the European Electronic Newsletter*. (2019). 21, no. 1.

⁸ Kostka, Genia. "China's social credit systems and public opinion: Explaining high levels of approval." *New Media & Society* 21, no. 7. (2019).

⁹ Hansen, Hans K. and Richard Weiskopf. "From Universalizing Transparency to the Interplay of Transparency Matrices: Critical insights from the emerging social credit system in China." *Organization Studies* 42, no. 1. (2021): 121.

potentially nefarious logics or objectives. In an example of extrapolating logic, researchers scraped blacklist and redlist data from Chinese government websites, framing this work as having revealed which behaviors cause people to be blacklisted or redlisted.¹⁰ Legal scholars pointed out that these behaviors are already outlined in publicly available policy documents about blacklisting and redlisting, however, suggesting that this research's contribution instead lies in mapping distributions of these fixed categories of punishable and rewardable behavior.

An example of extrapolated objectives can be found in social credit evaluations of companies, sometimes dubbed "corporate social credit." In Europe and the United States, there is a hypothesis that social credit evaluations of companies are a protectionist measure to specifically edge foreign firms out of China.¹¹ In 2017, Chinese authorities penalized Japanese retailer Muji, along with a few foreign airlines, for making references to Taiwan that could be read as recognition of Taiwan as an independent country. While some researchers and news media dubbed this as a sign that Chinese authorities were weaponizing social credit as a way to kneecap foreign firms, legal scholars in China noted that the penalties for enterprises were primarily intended to tighten enforcement of Chinese law over domestic firms. Laws around how Chinese entities are allowed to refer to Taiwan had existed before the social credit system, but the state's doubling down on enforcement of them drew renewed international attention to how draconian they were in the first place. The complexity of this system is further exacerbated by the state's lexicon of terms related to 'credit,' each bearing their own cultural and historical significance.

Definitions

Ambiguities around the social credit system's objectives and boundaries are a product of the language the state uses to describe it. Three words in particular, xinyong (信用), zhengxin (征信), and chengxin (诚信), appear in policy, propaganda, and news media about social credit. Zhengxin refers to traditional financial credit reporting, whereas chengxin can translate into honesty or integrity. Scholar Chenchen Zhang has labeled xinyong, which simply translates into 'credit,' as an interface between zhengxin and chengxin, bridging the tensions between the inherent market values of the former and the historical socialist connotations of the latter.¹² Chengxin also links to long-standing ideas of suzhi (素质), or the improvement of individuals' quality of

¹⁰ Engelmann, Severin, M. Chen, F. Fischer, C. Kao, J. Grossklags. "Clear Sanctions, Vague Rewards: How China's Social Credit System Currently Defines 'Good' and 'Bad' Behavior." FAT* '19: Proceedings of the Conference on Fairness, Accountability, and Transparency. (2019).

¹¹ Meissner, Mirjam. "China's Social Credit System: A big-data enabled approach to market regulation with broad implications for doing business in China." Mercator Institute for China Studies. (2017). <https://merics.org/en/report/chinas-social-credit-system>; Waddell, Kaveh. "Blacklisting foreign businesses in China." Axios. August 3, 2019. <https://www.axios.com/2019/08/03/china-social-credit-businesses>.

¹² Zhang, Chenchen. "Governing (through) trustworthiness: technologies of power and subjectification in China's social credit system." *Critical Asian Studies* 52, vol. 4. (2020): 567, 578.

character. In contrast to the malleability and fluid use of these terms, the two categories of credit information the state recognizes, public credit information and market credit information, are more defined.

According to Yongxi Chen and Anne Sy Cheung, public credit information constitutes “information indicating an individual’s trustworthiness that is generated or collected by the authorities in the course of exercising their public powers (i.e. government agencies, judicial authorities, organs that exercise administrative power under the authorisation of laws and regulations) or by public service providers.”¹³ Being on a court judgment defaulter blacklist, failure to pay into one’s social insurance plan, and tax evasion are examples of public credit information. Market credit information is generated within the private sector and hews more closely to the production of *zhengxin*, or financial credit reports. These two distinctions indicate where boundaries and limitations fall within the social credit system. As I discuss in Chapters 1 and 2, some tech firms provide aggregated market credit data to state institutions, whereas local governments I interviewed in Chapter 3 only use public credit data in their cities’ scoring systems given their inability to verify the accuracy of market credit data. Recognition that public- and private-sector actors have drawn these red lines has arrived late in the study of the social credit system, however, trailing two debates around Chinese law and the overall objective of this system.

Social credit and the law: business as usual or extralegal?

Since 2014, scholars have debated whether the social credit system is merely a way of giving pre-existing Chinese laws more power to be enforced¹⁴, or if it is instead novel for being extralegal by design. The first contingent demonstrates how social credit is a vehicle for social reproduction, or an “individualistic and data-driven technological fix that assesses and monitors the accountability and riskiness of individual actors... without reconfiguring social relations or political power.”¹⁵ This research tends to translate Chinese law to offer correctives for misunderstandings of how and why social credit-related punishments are dispensed.¹⁶ While at first glance this perspective might

¹³ Chen, Yongxi and Anne S.Y. Cheung. “The Transparent Self under Big Data Profiling: Privacy and Chinese Legislation on the Social Credit System.” *The Journal of Comparative Law* 12, no. 2. (2017): 364.

¹⁴ Daum, Jeremy. “China through a glass, darkly.” *China Law Translate*. (2017). <http://www.chinaalawtranslate.com/seeing-chinese-social-credit-through-a-glass-darkly/?lang=en> 2017; Zhang, Chenchen. “Governing (through) trustworthiness: technologies of power and subjectification in China’s social credit system.” *Critical Asian Studies* 52, vol. 4. (2020): 566.

¹⁵ Zhang, Chenchen. “Governing (through) trustworthiness: technologies of power and subjectification in China’s social credit system.” *Critical Asian Studies* 52, vol. 4. (2020): 575.

¹⁶ The mistaken belief that ‘low scores’ can get people banned from flights, for example, is one that a legal researcher would address by pointing out that this is impossible. Instead, the courts would

appear to downplay the potential harms of social credit, it does not foreclose the possibility that the system can inflict reputational and other damages on people's lives. Rather, this type of critique locates those harms in the law itself, as opposed to in its technological execution.

In contrast, critics who find that social credit departs from the letter of the law have, for example, argued that the system espouses a 'rule of trust' instead of rule of law—policing behaviors that some view as immoral but that are not illegal under Chinese law.¹⁷ A subset of this work attributes the tendency to punish immorality as a Chinese Communist Party (CCP) attempt to seize further control over Chinese citizens' lives as part of a strategy for "social management."¹⁸ Municipal scoring systems in particular have high potential to raise punitive stakes for minor transgressions such as disputes between neighbors, given that these localities develop their own bespoke indexes of behaviors to punish and reward. As I discuss in Chapter 3, however, some city governments are wary of overstepping the law and being rebuked by the central government, and may be cautious about how they develop their local systems. The question of whether social credit is simply giving old laws new teeth, or stepping outside of the law to penalize a potentially boundless range of behaviors, ties into the related debate over what the social credit system's higher-level objectives are and how these are reflected in the system's use of technology.

Behavioral nudges or societal reprogramming?

Commentary on social credit outside of China tends to either argue that the system is designed as a series of behavioral nudges to change individuals' actions, or conversely that it is an even more ambitious attempt to wield omnipotence over both China's citizens and economy, with occasional claims even extending beyond China's borders. Chenchen Zhang contrasts these two views as "disciplinary-pastoral power" and "governmental/biopolitical power", respectively.¹⁹ The conception of social credit as focused on changing individual thinking and behavior is one in which the system is

have to first determine that an individual was a judgment defaulter, then pass that person's identifying information on to the Civil Aviation Administration for them to be placed on a blacklist, and ultimately this blacklist data might be shared with the person's city government and used as a data point in numerically deducting points from their score in that city. Similar misconceptions that 'low scores' affect employment, education, and other opportunities abound. See Hanse and Weiskopf 119

¹⁷ Chen, Yu-jie, C. Lin, and H. Liu. "'Rule of Trust': The Power and Perils of China's Social Credit Megaproject." *Columbia Journal of Asian Law* 32, vol. 1. (2018): 3.

¹⁸ Hoffman, Samantha. "Programming China: The Communist Party's autonomic approach to managing state security." (2017). <https://merics.org/en/report/programming-china>; Hoffman, Samantha. "Social Credit: Technology-enhanced authoritarian control with global consequences." Australian Strategic Policy Institute. (2018). <https://www.aspi.org.au/report/social-credit>.

¹⁹ Zhang, Chenchen. "Governing (through) trustworthiness: technologies of power and subjectification in China's social credit system." *Critical Asian Studies* 52, vol. 4. (2020): 569.

characterized as a form of Chinese “technocracy rather than rule by algorithms.”²⁰ At least one source posits that social credit’s standardization and ensuing transparency about behaviors that are punishable under Chinese administrative law have the potential to serve as an improvement compared to the clientelism and arbitrary enforcement of laws that predate it.²¹

The ‘technocracy’ perspective on social credit is further borne out in instances where the system relies on human informants rather than China’s extensive networks of face recognition cameras and other surveillance technologies. Rather than subsuming all forms of surveillance and monitoring in China, social credit is but one project that operates in parallel with numerous rule-bound others. These include grid management, a centuries-old surveillance practice that relies on subjective reporting from personnel responsible for maintaining ‘social stability’ of their segments within the ‘grid’ of a neighborhood.²² Similarly, decisions about distribution of welfare, or *dibao* (低保), come down to factors including an individual’s potential threat to social stability as well as their financial and family circumstances as per the judgment of neighborhood ‘block captains’ who are responsible for making visual observations of applicants going about their everyday lives.²³ Social credit’s low-tech implementation in the small city of Rongcheng (Shandong), which has a population of under one million residents, features a local scoring system that the central government has touted as a ‘model’ of social credit implementation. Rongcheng’s extensive list of actions for which points can be added or deducted is notable for its associated analog method of data collection. Elders in the community often observe and record information in notebooks, from which the city government collates and digitizes citizens’ scoring information. The intermingling of human and automated evaluations that feed into a variety of social credit pilot implementations across China provide a reminder that technology is not likely to fully supplant all human interventions in the system’s future—a point that the more techno-dystopian narratives about social credit often neglect to take into account.

The second view is one in which scholars tend to use words like “comprehensive” and “all-encompassing” to describe the social credit system’s data

²⁰ Zhang, Chenchen. “Governing (through) trustworthiness: technologies of power and subjectification in China’s social credit system.” *Critical Asian Studies* 52, vol. 4. (2020): 578.

²¹ Suter, Viktor. “Algorithmic Panopticon: State Surveillance and Transparency in China’s Social Credit System.” *Communications in Computer and Information Science*, 1349. (2020): 42, 55.

²² Xu, Jianhua and Siying He. “Can Grid Governance Fix the Party-state’s Broken Windows? A Study of Stability Maintenance in Grassroots China.” *The China Quarterly*. (2022): 1-23.

²³ Pan, Jennifer. *Welfare for Autocrats: How Social Assistance in China Cares for its Rulers*. Oxford: Oxford University Press. 2020.

collection regime²⁴, despite research showing that the system does not utilize all data that either the state or the private sector collects on Chinese citizens. A corollary assumption is that social credit programs are ‘mandatory,’ which is overstated. All Chinese citizens and companies are assigned a social credit code (not unlike US citizens receiving social security numbers), are subject to Chinese law, and will have public credit information collected about them by virtue of interacting with state institutions. In these senses, they are not free to opt out of some of social credit’s core procedures. But as underwhelming participation numbers from city-level scoring systems show, millions of people are not availing themselves of these local systems’ platforms and apps. Looking beyond government-run tech to the private sector, related assumptions about unrestricted data flows build on this image of an inescapable panopticon.

Another distinguishing feature of the view of social credit as a totalizing arbiter of morality and opportunities in China is the fear of data flowing from private tech companies to the Chinese government.²⁵ This assumption about the state’s ability to reach into a pool of all data tech firms collect is increasingly disproven in research about other state-firm interactions in China.²⁶ This technical detail can often appear

²⁴ Chen, Yongxi and Anne S.Y. Cheung. “The Transparent Self under Big Data Profiling: Privacy and Chinese Legislation on the Social Credit System.” *The Journal of Comparative Law* 12, no. 2. (2017): 356; Suter, Viktor. “Algorithmic Panopticon: State Surveillance and Transparency in China’s

Social Credit System.” *Communications in Computer and Information Science*, 1349. (2020): 43.

²⁵ Chen, Yongxi and Anne S.Y. Cheung. “The Transparent Self under Big Data Profiling: Privacy and Chinese Legislation on the Social Credit System.” *The Journal of Comparative Law* 12, no. 2. (2017): 361.

²⁶ The assumption that the Chinese government can access any privately company-held data it wants to, without companies pushing back or outright resisting, is rarely questioned and nearly impossible to demonstrate using open sources, but nonetheless continues to have currency in US foreign policy discourse. As data policy expert Samm Sacks has argued, “The Chinese government does not necessarily have unfettered real-time access to all companies’ data,” nor are there any legal requirements for companies to pool either Chinese or foreign’ citizens’ data in a database for government use. Rather, the government makes manual requests for data to companies directly, which companies review and decide to comply with or reject. Legal researchers have also clarified that law enforcement and courts must file search warrants in circumstances where they seek to pull individuals’ data from tech firms. Warrants are often easy to acquire, but still give tech companies discretion in data-sharing. Sacks additionally challenges the widely touted belief that the Chinese Communist Party is in full control of companies, revealing a dynamic that accounts for why stories of tech firms’ resistance to government requests for data rarely make headlines. If firms were to draw media attention to instances in which they refused government orders for data, they would open themselves up to additional pressure to comply. Finally, Sacks also highlights the tensions within the Chinese government itself that act as roadblocks to data sharing for political and economic reasons, describing how even after the passage of the country’s sweeping Cybersecurity Law, “Local officials must balance competing demands of security with immense pressure to deliver economic development in their jurisdiction. The Chinese Communist Party derives its ruling authority in large part by providing economic prosperity. Furthermore, different local government agencies often have different objectives. Sometimes companies will leverage connections with officials from other agencies to stop security bureau officials from seeking certain kinds of data.” Sacks, Samm. “Data Security and U.S.-China Tech Entanglement.” *Lawfare*. April 2, 2020. <https://www.lawfareblog.com/data-security-and-us-china-tech-entanglement>.

inconsequential given the staggering scope of technological surveillance in China, and the immense challenges in tracking how this surveillance is contracted out to thousands of domestic companies.²⁷ Nonetheless, it is an opening for this dissertation's investigation of patterns emerging from these tech governance projects that are likely to be replicated in the future.

Rather than focus on the flow of data from tech firms to the state—which I show is not as straightforward as 'pooling' and which tech firms find more bounded, creative responses to such as providing aggregated user data—my research draws attention to instances where the state passes its data to tech companies for their internal use.

Pandemic management tech is a prime example of the consequences of giving state-generated data even more authority. Chinese dissidents speculated that the state could falsify their contact tracing data in order to claim they violated quarantine rules and impose further restrictions on their mobility. Tech firms such as Alibaba run apps with health codes that determine freedom of movement for everyone currently residing in China. Red health codes indicate that people are either confirmed positive Covid-19 cases or are high health risks for some other unspecified reason, and are not allowed to leave their homes until their codes change. Recent news reports suggest that authorities found a way to change would-be protesters' health codes to red as a way of barring them from traveling to a state-run bank that had not paid out their salaries in months.²⁸

Finally, this view of social credit tends to venture into predictions of a future where the system reaches an imagined zenith of power²⁹, which proponents often pair with the belief that the state will incorporate artificial intelligence into the social credit system.³⁰ The implicit assumption in these ominous references to artificial intelligence is that its presence will necessarily incur harm, and that it will be used in an unrestrained, unaccountable manner. As I note in Chapter 1, some applications of artificial intelligence are used to determine judgment defaulters' ability to pay court fines based on their financial records and assets, and to target smartphone app notifications designed to shame judgment defaulters by reaching people in the judgment defaulters' immediate communities. Both of these uses carry risks for the people they are applied

²⁷ Mozur, Paul, Muiy Xiao, and John Liu. "'An Invisible Cage': How China Is Policing the Future." *New York Times*. June 25, 2022.

<https://www.nytimes.com/2022/06/25/technology/china-surveillance-police.html>.

²⁸ Tham, Engen. "China bank protest stopped by health codes turning red, depositors say." *Reuters*. June 16, 2022.

<https://www.reuters.com/world/china/china-bank-protest-stopped-by-health-codes-turning-red-depositors-say-2022-06-14/>.

²⁹ Suter, Viktor. "Algorithmic Panopticon: State Surveillance and Transparency in China's Social Credit System." *Communications in Computer and Information Science*, 1349. (2020): 43.

³⁰ Chen, Yu-jie, C. Lin, and H. Liu. "'Rule of Trust': The Power and Perils of China's Social Credit Megaproject." *Columbia Journal of Asian Law* 32, vol. 1. (2018): 1, 5.

to. Yet at the same time it is important to note they are far more curtailed than the scenarios critics envision.

Methods

From fall 2018 to spring 2019, I conducted fieldwork in China on a Fulbright Study/Research grant while hosted at the Peking University law school. I attended seven conferences on social credit, the digital economy, and Chinese law to recruit interviewees from tech firms, local governments, and law schools. Tech firms tended to send legal counsel and more research-oriented staff to these events to gather information and network with officials and legal scholars. Some members of city-level offices of China's National Development and Reform Commission (NDRC) attended, as did representatives from a variety of related governmental and quasi-governmental institutions such as municipal big data research centers. I conducted six one-on-one interviews, four group interviews, and draw from three conference talks in this dissertation.

Conferences and interviews took me to a range of Chinese cities: Beijing, Suzhou, Hangzhou, Shanghai, Fuzhou, Xiamen, Guangdong, and Guiyang. While collecting conference proceedings as one source of data, I also surveyed Chinese law publications, news media, WeChat Public Accounts, policy documents, and tech company marketing materials for supplemental material. My interviews ran from one to two hours, and in the vast majority of them participants allowed me to record our conversations. I used open coding to trace emergent themes across my interviews.

Within the field, I stood out as a foreign researcher. I found it helped lead with a description of my interest in social credit to establish that I was not interested in perpetuating some of the myths about the system that circulated outside of China. Expressing a detailed level of knowledge and conveying some of my research questions in an accessible way demonstrated to my interviewees that I was trying to understand this subject almost entirely from Mandarin-based sources and local perspectives. While this worked toward building trust between me and my interviewees, there were times when my status as a foreigner excluded me from useful opportunities for fieldwork. A conference that a law professor who served as one of my main mentors and co-authors tried to get me invited to, for instance, told him they had not registered to allow foreign participants to attend in time to have the request approved.

Aside from these externally imposed limitations, methodological limitations include the over-representation of wealthier eastern cities in my research, and the prioritization of gathering qualitative data from state, tech industry, and academic actors as opposed to from Chinese citizens who were treated as "users" of the technologies that came out state-firm collaborations. My opportunistic approach to recruiting interview subjects depended on connections I made through my networks, which were concentrated along China's east coast. For instance, journalists who had interviewed me about the social credit system for Western news media made occasional introductions to people they thought would be useful to my research, and law

professors at my Fulbright host institution would notify me about conferences they thought were relevant to my research.

My originally proposed project sought to understand how citizens perceived and changed their behavior in response to private sector and local government-run apps, websites, and other tech infrastructure of the social credit system. In earlier pilot research and at the beginning of my fieldwork, however, I quickly realized that people's understanding of these interconnected technologies varied widely and was full of misperceptions about the law and the types of evaluations tech companies made. I decided to switch my focus to the state-firm relationship instead. One reason was that many of the technologies I wanted to focus on were likely to change or disappear altogether, but the dynamic between government and tech companies underlying the creation or modification of these technologies was more likely to endure. Capturing how this relationship evolved over time would also be of value in identifying patterns in the longer arc of how state-firm relationships that underpin the technological implementation of policy projects will develop in the future.

Limitations

In the summer of 2019, I left China as my visa and fellowship ended. I planned to return to continue data collection and attend conferences. Yet by the end of that year and leading up through the present, the Chinese government imposed increasingly stringent barriers to entering the country due to the Covid-19 pandemic. Mounting tensions between the US and China, with causes ranging from the trade war, to allegations of Chinese theft of US intellectual property (IP), to US fears that China plans to become an "AI superpower" whose military and economy will be unparalleled, further exacerbated hostilities between the two countries. Foreign scholars have not been allowed to enter China since late 2019, which has stymied the research that is necessary for outsiders to understand conditions within China and for potentially easing fraught foreign relations.³¹ This is a problem that would require changes in both countries; the State Department has ended fellowships supporting travel to China and Hong Kong for the Fulbright program that made my dissertation research possible.

Upon realizing that I would not be returning to China to complete the research for this dissertation, I attempted to supplement the data I had already collected with secondary sources available through Chinese academic databases and news outlets. The initial limitation I found with these materials was that from having done fieldwork, I knew that many of the ambitious goals promised or even written about as having been achieved in policy documents and news articles seldom matched reality on the ground. Moreover, sources tend to disappear from the Chinese Internet for any number of

³¹ Communications with Chinese scholars has also been difficult in light of increased Chinese government monitoring of and constraints on their travel to overseas conferences. Feng, Emily. "China tightens restrictions and bars scholars from international conferences." NPR. March 30, 2022. <https://www.npr.org/2022/03/30/1089631713/china-tightens-restrictions-and-bars-scholars-from-international-conferences?t=1658674653515>.

reasons.³² The Cyberspace Administration of China is conducting cybersecurity regulatory probes that include some of the country's biggest internationally accessible academic databases on the grounds that these contain data that should not be exported because it is critical to national security and technological competitiveness.³³ Data scraping of open government information in China has become a pursuit of fast-disappearing sources.³⁴ Geopolitical and domestic regulatory pressures did not make the fieldwork itself that difficult to conduct at the time that I was in China, although much like other researchers who study China, I designed my project to minimize undue attention from authorities, danger to my interview subjects for meeting with me, and other barriers.³⁵ Additional limitations of this work involve subjects that were too expansive for this research to accommodate and that require separate expertise for interpretation.

At several of the conferences I attended in China, and throughout much of my secondary source material, I encountered terms such as "integrity culture" (诚信文化) used to describe an intangible shared set of social and cultural touchpoints people inherently associated with the concept of a social credit system in China. When this term came up among all-Chinese conference attendees, people around the room nodded along while I acknowledged to myself that my research would have to set aside the goal of comprehending the wealth of examples they had accumulated from childhood education up through their more specialized work in law and tech today. Walking through many of the cities I traveled to for fieldwork, my gaze would fall upon propaganda posters for the twelve socialist core values the state tried to promote in the populace, among which honesty (诚信) is one that is pivotal to the social credit system.

Identifying and analyzing what this collection of signifiers mean in aggregate—from references to concepts of credit, honesty, and trust in Confucian and other historical Chinese philosophical traditions, to the still-evolving idea of trustworthiness that the social credit system espouses—is a fertile ground for anthropological work in China. Legal scholar Jeremy Daum breaks social credit down into three components: legal, moral, and educational. The referents of "integrity culture" I encountered fell between the moral and the educational. The history of concepts such as *suzhi* (素质,

³² Yang, Stephanie. "As China shuts out the world, internet access from abroad gets harder too." Los Angeles Times. June 23, 2022.
<https://www.latimes.com/world-nation/story/2022-06-23/china-great-firewall-foreign-domestic-virtual-censorship>.

³³ Huang, Raffaele. "China Probes Operator of Nation's Biggest Academic Database." Wall Street Journal. June 24, 2022.
<https://www.wsj.com/articles/china-probes-operator-of-nations-biggest-academic-database-11656074605>.

³⁴ This has been conveyed at conferences and workshops I have attended virtually and in the US, and is also apparent through examples such as the removal of death penalty judgment data from China Judgments Online, the country's (and the world's) biggest database of publicly available court judgments. Xie, Echo. "Millions of court rulings removed from official Chinese database." South China Morning Post. June 26, 2021.
<https://www.scmp.com/news/china/politics/article/3138830/millions-court-rulings-removed-official-chinese-database>.

³⁵ Greitens, Sheena, Rory Truex. "Repressive Experiences among China Scholars: New Evidence from Survey Data." *The China Quarterly* 242. (2020).

“quality”) as it is used to describe human beings is also relevant here, and prior research has turned an eye to how *suzhi* interacts with technology in projects that seek to remake the state by refining and cultivating individual citizens.³⁶ In opting to focus on the state-firm dynamic in this dissertation, I did not treat this aspect of the social credit system with the level of investigation it merits.

A major additional factor this dissertation does not address is the role of the Chinese Communist Party (CCP) in developing and implementing the social credit system. The Party presence at conferences I attended and in sources I cited was minimal, and contrasted sources that frame social credit as a central pillar of Party legitimacy.³⁷ Scholars who focus on the CCP, however, are better equipped to design research that specifically locates both Party influence over the social credit system’s development trajectory and the benefits the Party has accrued in the public response to the system thus far.

Overview

Chapter 2 describes early trials of blacklisting and redlisting from the 2000s, and how despite inconclusive results, the state scaled up both practices as central pillars of today’s social credit system. I trace how courts create a narrative of judgment defaulters as “*laolai*,” or malingerers, to justify invasions of these citizens’ rights to privacy. I describe how e-commerce giant Alibaba created “smart enforcement” software to help courts evaluate and apprehend judgment defaulters, and how news aggregator app Toutiao is complicit in shaming judgment defaulters by alerting users in partnering cities when they are within physical proximity to these blacklisted people. I argue that rather than building social trust, this component of the system is a performative governance project that is more likely to erode interpersonal trust, particularly when it uses reward incentives for people to act as informants against their peers.

Chapter 3 explains the strategic responses to structured uncertainty that three firms, Ant Financial (fintech and consumer ratings), Didi Chuxing (ride-hailing), and Meituan (food delivery) took when multiple government agencies approached them to participate in social credit initiatives. Chapter 4 turns to the frequently overlooked small firms that use the government procurement bidding process to secure contracts for building out the hardware and software of local social credit projects. I look at how two city governments in Fuzhou and Xiamen (Fujian) developed their local scoring systems, as well as the firm-side perspective on these types of arrangements based on the

³⁶ Lindtner, Silvia. *Prototype Nation: China and the Contested Promise of Innovation*. Princeton, NJ: Princeton University Press. 2020.

³⁷ Hoffman, Samantha. “Managing the State: Social Credit, Surveillance and the CCP’s Plan for China.” *China Brief* 17, (11).
<https://jamestown.org/program/managing-the-state-social-credit-surveillance-and-the-ccps-plan-for-china/>.

experience of a small credit company in Suzhou (Jiangsu). Chapter 5 concludes with findings that may inform future research not only on the social credit system, but on other national tech governance projects that require state-firm collaboration and tailored implementations at the local level.

Chapter 2

The Social Life of Blacklists: How Courts Partnered with Tech Platforms to Create a New Infrastructure of Shame

Introduction

Amidst the bevy of societal ills the social credit system attempts to tackle, one central goal involves enforcement of court orders against people who have violated Chinese administrative law. Known as judgment defaulters (失信被执行人, lit. “person who has lost trust and is being enforced against”), these individuals are subject to the courts imposing penalties on them (often fines or specific actions taken to fulfill a court order). The courts distribute blacklists (黑名单) of their names and identifying information to dozens of government departments which then place restrictions on judgment defaulters' activities. Under restrictions enshrined in the law that block blacklisters from “luxury consumption,” for example, these judgment defaulters are barred from air travel, riding high speed rail, and sending their children to private schools until they fulfill court orders and are removed from blacklists. In this chapter, I argue that blacklisting persists a form of what political scientist Iza Ding calls “performative governance.” Ding defines performative governance as “the theatrical deployment of language, symbols, and gestures to foster an impression of good governance among citizens,” to describe how bureaucrats act when facing low state capacity and high public scrutiny.³⁸

Blacklisting pre-dates the 2014 State Council planning document that outlined the state's vision for the social credit system. It has been folded into the social credit system as a foundational practice that is likely to remain constant even as the state continues to tinker with future iterations. This chapter investigates how blacklisting changes as major Chinese tech firms work with the state to either assess blacklisters' abilities to perform on court orders, or to conduct targeted shaming of blacklisters within their social networks. First, I revisit earlier attempts at using blacklisting and its reward-granting counterpart, redlisting, to build a social credit system in early 2000s China. There was no definitive evidence from that earlier experiment to indicate that either practice caused a significant change in companies' behavior, yet the state chose to keep and scale up both of these mechanisms to apply to individuals, legal institutions, and government actors themselves.

After years of struggling to enforce court orders against judgment defaulters, the courts used blacklisting to shame and pressure these people to pay court fines or otherwise fulfill their judgments. In the second section, I look at how blacklisting

³⁸ “Ding, Iza. “Performative Governance.” *World Politics* 72, no. 4. (2020): 525.

evolved to follow judgment defaulters in their personal lives as tech firms collaborated with the courts. Using secondary sources, I trace how Alibaba built “smart enforcement” software that intervenes at multiple stages in the life cycle of a judgment defaulter—from making the pivotal assessment of individuals’ ability to pay court fines based on their total assets, to potentially seizing and auctioning off their property on Alibaba’s auction platform. I also show how Toutiao, a ByteDance-run news aggregator app, spun off multiple partnerships with courts around the country to send alerts to people in these courts’ jurisdictions about judgment defaulters in their area. Alibaba benefited from access to government-generated data that it could use to spin off other “smart court” technology. Toutiao likely sought to appear to be upholding a civic duty at the same time that the company came under government scrutiny for both spreading misinformation and not promoting enough Party content.

In the third section I look at how the courts solicit information from the public to act as informants against judgment defaulters despite the multiple technological interventions on hand to communicate with, monitor, and punish these blacklisted people. This last-mile reliance on human surveillance, combined with what appears to be no meaningful drop in the number of people being blacklisted over time, suggest that blacklisting persists at best as a large-scale instance of performative governance. Yet there have been limited investigations into the toll this performativity takes on both current blacklisters and in the aftermath of being removed from court blacklists.

I close this chapter by addressing controversies that arise from the digital distribution of blacklists, many of which critics seek to address with further technological solutionism. While I found that legal scholars in China are concerned about the reputational harms that emerge from digitized blacklists shared with third parties, I did not encounter anyone in China who suggested terminating the practice of blacklisting. I also saw limited explorations of the results of redlists (红名单), or lists of individuals and companies who are considered exemplary for behavior such as donating blood or charitable giving, and who are rewarded with small perks such as expedited processing of official licenses.

Early Experiments in Blacklisting and Redlisting

Both blacklisting and redlisting can be traced back to at least the early 2000s. Then, as now, red- and blacklists were experimentally applied to entire industries at the provincial and city level. Two elements of red- and blacklisting of companies have carried over from experiments in the early 21st century to the present: selection criteria and perks applied to companies, and language around building honesty and integrity (chengxin, 诚信) in the market. Former State Administration for Industry and Commerce (now the State Administration of Market Regulation) director Wang Zhongfu castigated “abuse of power for personal gain, unfair and arbitrary enforcement of the law, [and] rough management” as “skeletons in the closet” of industrial operations throughout China in his 2004 speech at SAIC’s annual working conference,

citing the now-infamous incident of tainted milk powder from a factory in Anhui province.³⁹ t

Thus SAIC proposed blacklisting firms that violated the law with impunity, and bestowing consistently law-abiding companies with financial and market rewards, as panaceas for eliminating dishonesty from a broad swath of Chinese commercial sectors.

Just as important as cracking down on illegal activity, two objectives of improving the image of companies and entire sectors included creating fairer competition and protecting consumers. Lu Chengxi, Chief Economist of Guangdong's National Development and Reform Commission (NDRC), was more explicit in linking integrity to the province's soft power in 2003.⁴⁰ The parallels with contemporary language about creating an integrity system underscores that the moral aspect of blacklisting and redlisting existed long before the intensification of propaganda in the Xi Jinping era. News coverage of Guizhou's creation of black- and redlists for the highway construction procurement order bidding process in 2009, for instance, is almost indistinguishable from the language used in that city's 2014 social credit planning outline.⁴¹

Early techno-optimist arguments about how information technology and data centralization could ensure that black- and redlisting practices were neutral, efficient, and reliable call to mind recent hype around the social credit system in China. A contemporaneous account of an e-government project launched in 2003, the "Golden Credit Project" (金信工程), described it as helping create a social credit system (社会信用体系) by conducting market supervision and administrative law enforcement across a host of industries. Like the current iteration of the social credit system, Golden Credit was open to multiple local interpretations of its requirements—which then, as now, left local governments free to hire tech firms and experiment with new ways of organizing and monitoring companies' information.

The following year, the city of Jiayuguan's (Gansu) local commerce bureau contracted with a company named Baoda (保达公司) to design and implement an online network that included management of a website for publicizing red- and blacklists, centralization of data that had previously been distributed among various industrial and commercial offices, and the digitization of older records. As I discuss in Chapter 3, hundreds of small tech firms like this one are now being contracted to build the

³⁹ As of 2018, SAIC was merged into the State Administration for Management and Commerce. 宋家雨 [Song Jiayu]. “黑/红名单”的背后 [“Behind Black/Redlists”]. 《网络世界》 [Internet World]. August 30, 2004.

⁴⁰ For Chongqing, see 廖仁治 [Liao Renzhi]. “重庆推出代理人‘红名单’制度” [“Chongqing Launches a Representative ‘Redlist’ System”]. 《中国保险报》 [China Insurance News]. May 28, 2003. For Guangdong see 李强 [Li Qiang]. “粤拟建立诚信红黑名单制” [Guangdong Plans to Establish Integrity Redlist and Blacklist System”. 《南方日报》 [Southern Daily]. September 4, 2014. For Guizhou see 张伟 [Zhang Wei]. “贵州评选‘诚信示范企业’” [“Guizhou Chosen for ‘Honest Enterprise Demonstration’”]. 《贵州政协报》 [Guizhou Party Committee News]. January 12, 2016.

⁴¹ 王丽 [Wang Li]. “贵州‘黑名单’‘红名单’制度使公路建设招投标公开透明” [“Guizhou ‘Blacklist,’ ‘Redlist,’ System Makes Highway Construction Procurement Open and Transparent”]. 《中国改革报》 [China Reform News]. July 14, 2009; 靳斯慰 [“Jin Siwei”]. “贵州出台社会信用体系建设规划纲要” [“Guizhou Debuts Outline for Social Credit Construction Plan”]. 《金融时报》 [Finance Times]. October 9, 2014.

hardware and software of local social credit pilots. These firms still describe themselves as not providing the most sophisticated tech solutions, but rather play to their strengths as intermediaries connecting government and industry.

In what reads almost as a presentiment of the intentionally localized state of today's social credit system, a Chinese journalist's description of Jiayuguan's black- and redlisting industry information system as "not the most advanced" but nonetheless suited to the geographical conditions of Western China, noted that such a solution would not be appropriate for Beijing, Shanghai, and other big cities.⁴² Reiteration of this logic arose in my interview with an economist who has closely advised the NDRC on the social credit system for years. He was averse to the creation of a national social credit score, primarily because such a score would fail to capture the vast differences in economic and social conditions across China's many provinces and even between cities and rural areas within a single province.

While the reasoning for social credit's local adaptability still holds today, the logic behind why some elements of these early trials carried into the present and others faded away is not apparent. Some problems that authorities attempted to solve locally with blacklisting in the 2000s continue to be treated with both city-level and national blacklisting, such as punishing employers for wage arrears. In Beijing, companies that withhold wages from migrant workers can now be blacklisted.⁴³ The utility of positive incentives is even less clear. One Chinese scholar pointed out that when it comes to issues like food safety, red lists do not necessarily bring restaurants more customers, and blacklists do not fully eradicate unsafe practices.⁴⁴ There was no clear indication that these early trials of what would become the core elements of the social credit system meaningfully mitigated the slew of problems that the system's current iteration continues to promise to solve. Nonetheless, the state still argues that the system can combat the same social and market problems of over a decade ago, and employs identical language about integrity-building and technology's promise in securing that outcome.

Contemporary Blacklisting and Redlisting

What has changed? At a glance, two of the biggest developments include a more systematic approach to enlisting local print and digital media outlets in publicity of red- and blacklists, and a more lucrative, expansive set of opportunities for tech firms to create and operate the infrastructure of the social credit system. Moreover, whereas prior blacklisting experiments primarily had companies in their crosshairs, the social credit system is now well-known for blacklisting individuals. Even in instances where companies are blacklisted, it is often their senior leadership who ends up facing restrictions on travel and consumption. Another major shift is that Chinese tech

⁴² 宋家雨 [Song Jiayu]. "“黑/红名单”的背后 ["Behind Black/Redlists"]. 《网络世界》 [Internet World]. August 30, 2004.

⁴³ 王天洪 [Wang Tianqi]. "和谐用工单位将入信用‘红名单’" ["Harmonize Employers' Inclusion in Credit 'Redlists'"]. 《北京日报》 [Beijing Times]. August 6, 2019.

⁴⁴ "食品安全‘红黑名单’作用恐难高估" ["The Role of Food Safety 'Red- and Blacklists' Is Underestimated"]. 《协商论坛》 [Consultative Forum]. 2014(06): 60.

companies have become more deeply ingrained into the fabric of everyday life for a significant portion of the population, while also balancing how to protect their interests in their relationships with the government. This dynamic is central to the examples described later in this chapter. It partially accounts for why the system has not only diverged from its early 2000s precursor, but also why it has garnered so much attention in China and abroad. Were redlists and blacklists deemed so successful at reducing local market transgressions that they earned a place in every Chinese province?

Arguments that offer evidence for the success of red- and blacklists are sparse and fail to account for other factors that may have improved outcomes.⁴⁵ The Chinese academic literature on black- and redlisting does not include cost-benefit evaluations of specific effects these mechanisms are responsible for in different economic sectors, let alone in individual judgment defaulters' lives. One commentator who has expressed optimism that redlists can have a "catfish effect" (鲶鱼效应)—wherein a strong competitor is presumed to encourage weaker counterparts to work harder—nevertheless had reservations around how likely this dynamic is to play out between companies.⁴⁶

Blacklisting and redlisting have also grown more standardized since becoming central to the state's conception of the social credit system. People can only be removed from blacklists either when they fulfill court obligations or successfully contest instances when they believe they have been wrongfully blacklisted. In contrast, red lists have an expiration date. Companies and individuals can be removed from redlists earlier if they are found to no longer exhibit the qualities that earned them the distinction.⁴⁷ Fears that the national standardization of blacklisting could be used to penalize people engaging in lawful activities that the state finds unfavorable, or to target individuals and organizations for surveillance and censorship, are not unwarranted. In practice, however, they have deviated from these expectations.

One of the few uses of face recognition technology tied to the social credit system comes from Credit China (信用中国), a centralized NDRC-run website with social credit related news, policy documents, and a mix of databases that are either available to the public, to firms, or to government officials. Sources suggest that some parts of the Credit

⁴⁵ For instance, in 2015, news coverage of the effects of black- and redlisting in Panzhihua (Sichuan) claimed that the mostly metal and energy-producing city's long-standing problems with overcapacity, rising production costs, declining efficiency, and low investment confidence were resolved through the allocation of benefits such as prioritization of emergency lending and other financial assistance to companies that were redlisted. This success story took a 3.1% year-on-year increase in output value and a 9.9% increase in added value of these industries' companies as indicators that redlisting was effective. 江潇 [Jiang Xiao]. "'红名单': 精准帮扶助企业走出困境" ["'Redlists': Accurately Helping Enterprises Out of Their Dilemma"].《攀枝花日报》 [Panzhihua Daily]. July 15, 2015.

⁴⁶ 苑广阔 [Yuan Guangkuo]. "守法经营者都应进入'红名单'" ["Law-Abiding Managers Should All Be on 'Redlists'"].《广西日报》 [Guangxi Daily News]. January 9, 2019.

⁴⁷ 石新中 [Shi Xinzong]. "施行红黑名单制度最终是要实现信用奖惩" ["Implementing Red- and Blacklist System Ultimately Achieves Credit Rewards and Punishments"].《中国信用》[Credit China]. January 2018;《关于加强和规范守信联合激励和失信联合惩戒对象名单管理工作的指导意见》 ["Guiding Opinions on Strengthening and Regulating the Management of the List of Targets for Joint Incentives for Trustworthy and Joint Punishment for Dishonesty"]. National Development and Reform Commission. January 19, 2018.

https://www.ndrc.gov.cn/xxgk/zcfb/tz/201803/t20180308_962679.html?code=&state=123.

China website uses face recognition to "establish a unified and unique user authentication system."⁴⁸ Yet government officials, rather than civilians, are likely to be the primary users of this platform and to bear the security and surveillance risks that come with the collection of face data. As the state started to ramp up punitive measures for blacklists, critics worried that Internet access could be throttled or removed for those whose expressions of political speech the state might deem threatening to "social stability." As of September 2015, one measure for restricting blacklisted companies included limiting their Internet access.⁴⁹ However, to gauge if this punishment is disproportionately applied to certain entities, or wrongfully applied to those with no legal violations, requires further research drawing from blacklists and interviews with the listed companies.

One missing critique of the social credit system involves questioning how reward mechanisms can exacerbate unequal treatment. Given how widely publicized blacklists are, redlisting is rarely an object of closer inquiry, despite the ways it might reinforce favoritism and inequalities in Chinese bureaucracy. For example, expedited inspections and processing of licensing documents for redlisted entities foreground how unnecessarily burdensome these administrative processes are for the general public. At the same time, fewer resources are devoted to redlisting, possibly a legacy of how much of the social credit system is predicated on the narrative of court enforcement and its challenges in tracking down and punishing judgment defaulters.

"Enforcement is difficult"

How did Chinese courts, telecommunications service providers, and tech companies work to operationalize the State Council's broad social credit policy goal of "ensur[ing] that those keeping trust receive benefit in all respects, and those breaking trust meet with difficulty at every step"?⁵⁰ Throughout Chinese courts, from the Supreme People's court down through intermediate and grassroots courts, the courts made regular use of the phrase "enforcement is difficult" (执行难) well before the State Council proposed a centralized social credit system as part of the solution. Judgment defaulters, or people who have broken administrative law, then lost a lawsuit brought against them by another party or the state, and have finally continued to default on court judgments despite being placed on court blacklists, are attributed as the source of this difficulty. Courts have historically struggled to track many of these people down and serve them with court documents. It is hard to know how many blacklists simply did not know about their legal violations, and how many intentionally dodged the

⁴⁸ "信用红黑名单管理制度出台" ["Credit Red- and Blacklist Management Systems Launched"]. 《信用中国》[China Credit]. 2017(11): 15; Chen, Yu-jie, C. Lin, and H. Liu. "'Rule of Trust': The Power and Perils of China's Social Credit Megaproject." *Columbia Journal of Asian Law* 32, vol. 1. (2018): 26-27.

⁴⁹ 阚丽丽 [Han Lili]. "规范管理'红黑名单'社会信用体系建设提档加速" [Standardize Management of 'Red- and Blacklists,' Accelerate the Construction of the Social Credit System]. 《新产经》 [New Finance]. 2017(86): 73-75.

⁵⁰ Creemers, Rogier. "Planning outline for the construction of a social credit system (2014–2020)." China Copyright and Media (2014). <https://chinacopyrightandmedia.wordpress.com/2014/06/14/planning-outline-for-the-construction-of-a-social-credit-system-2014-2020/>.

courts. The courts frame evasion of court enforcement, whether unwittingly or by choice, as justification for more invasive measures that involve partnering with tech and telecommunications companies to shame and pressure judgment defaulters into fulfilling their court orders.

During my fieldwork, a refrain I heard both at Chinese law conferences and from US and European diplomats based in Beijing was that the wide swath of state-initiated enforcement actions taken against judgment defaulters comprised one of the most impressive achievements of the social credit system. Foreign media often treated the 2020 objectives for implementing the social credit system as indicative that by that year, a single, national scoring system would be launched nationwide. This was a misinterpretation that failed to come to fruition, and overlooked the real 2020 benchmark: full implementation of enforcement mechanisms that over four dozen disparate government bureaus administer in coordination with one another. The challenges facing enforcement would seem to be reconcilable through use of the state surveillance apparatus for which China is now infamous— including near-ubiquitous surveillance cameras, many of which are equipped with face recognition capabilities, and real-name registration for all online accounts, among others. But the courts are unable to tap into these data sources that to date seem reserved for law enforcement use. They therefore struggle both with physically tracking down people who refuse to act on court orders, and verifying these individuals' property ownership status in an effort to order asset seizure as a civil penalty.⁵¹ Therefore in practice, the kind of surveillance that court enforcement relies on is slower and more narrowly curtailed than expected.

Some of the best-known examples are restrictions barring judgment defaulters from booking flights (which it is the responsibility of the civil aviation administration to oversee), from riding high-speed rail (under the control of the railway administration), or from sending their children to private schools (under the purview of the Ministry of Education). In some places judgment defaulters are also barred from purchasing homes and additional cars. The goal of these types of restrictions is to make life less convenient and comfortable for judgment defaulters, in the hopes of making them quickly fulfill their court orders. To complement the whole-of-government approach to penalizing judgment defaulters, state and local media contribute to propagandistic portrayals of judgment defaulters that draw citizens around the country into reviling and socially stigmatizing these individuals.

Citing Sunzi's *The Art of War*, one depiction of how the courts work with companies to coerce judgment defaulters draws a parallel to "soldiers who subdue the enemy without fighting" ("不战而屈人之兵").⁵² The implicit characterization of judgment defaulters as "the enemy" may read as far-fetched, but a glance at Chinese news and social media confirms the harsh stereotypes inherent to the social construct of the judgment defaulter as *laolai* (老赖). Often translated into English as "deadbeat" and

⁵¹ 刘勋 [Liu Xun]. "老赖信息就应精准曝光" ["Laolai Information Should Be Accurately Exposed"]. Xinhua. January 31, 2018. http://www.xinhuanet.com/2018-01/31/c_1122344103.htm.

⁵² 刘勋 [Liu Xun]. "老赖信息就应精准曝光" ["Laolai Information Should Be Accurately Exposed"]. Xinhua. January 31, 2018. http://www.xinhuanet.com/2018-01/31/c_1122344103.htm.

literally meaning “old dependent”—i.e., someone who depends on society to absorb the financial burdens of their illegal behavior—laolai is used in place of the formal term for judgment defaulter to channel disgust and blame while simultaneously justifying the social credit system’s state-legitimizing objective. One element of the laolai archetype that is effective in fomenting public rancor is the belief that “Many people who refuse to effectively fulfill court judgments live comfortable lives while claiming that they are penniless.”⁵³

Aside from the malingerer behavior associated with laolai, an additional set of assumptions harnesses and directs collective public frustration towards exposing (曝光) these individuals. Cartoons that accompany articles cited throughout this chapter are rife with images of laolai being stripped of their imagined ill-begotten wealth: turned away from flights while clutching money-stuffed briefcases, or denied loans, among other examples of the state putting an end to their carefree duplicitousness. In Chinese news media, interviews with unrepentant judgment defaulters are by all appearances nonexistent; only their reformed counterparts give testament to how public shaming or consumption restrictions nudged them into fulfilling their court obligations.

This straitjacketing of judgment defaulters into the singular image of the laolai leaves no room for hearing from people who may be caught up in judgment defaulter blacklists for reasons related to bureaucratic error or other explanations. Citizens’ grievances with weak state institutions are rerouted and directed at the convenient scapegoat of the laolai. In conjunction with the rewards schemes I discuss in Chapter 2 and the benefits awarded through scoring systems in Chapter 3, these measures are designed to create a combined effect of the state valuing citizens who behave in what it deems a ‘trustworthy’ manner, while showing these same people that ‘untrustworthy’ actors are no longer free to ignore the law and suffer no consequences. The courts’ need for this display of their performative power to reach as many people as possible positions tech firms to collaborate with them in targeted shaming and pressuring of judgment defaulters through online platforms they and their communities use every day.

Alibaba as Enforcement Collaborator

The groundwork for digitized and highly localized publicization of judgment defaulter information slightly pre-dates the 2014 State Council social credit planning document, such as in the 2013 “Provisions on Disclosure of Information about Lists of Judgment Defaulters Subject to Enforcement,” and revisions made to the Civil Procedure law in 2008.⁵⁴ In 2019, the SPC’s “Fifth Five-Year Reform Outline” called for the use of “smart assistive and big data analysis technology,” with an “Outline for Enforcement Work” from that year specifying the use of AI for investigating judgment

⁵³ 刘勋 [Liu Xun]. “老赖信息就应精准曝光” [“Laolai Information Should Be Accurately Exposed”]. Xinhua. January 31, 2018. http://www.xinhuanet.com/2018-01/31/c_1122344103.htm.

⁵⁴ “山东烟台中院利用人工智能曝光‘老赖’” [“Shandong’s Yantai Intermediate Court Uses Artificial Intelligence to Expose ‘Laolai’”].《法治周末》[Legal Weekly]. June 2, 2017. http://yq.jcrb.com/SJHLW/HLWTLZ/201706/t20170602_1759118.html.

defaulters' property holdings.⁵⁵ After the suggestion to incorporate AI and automation into the enforcement process came from the Supreme People's Court, local courts and tech companies have pieced together how to fulfill this expectation. As discussed below, "feedback lists" and "clue maps" are two ways of gathering information about individuals' property and asset ownership that the courts solicit from the public as well as from banks, mobile payment applications, and other sources.

The shift towards enlisting major online platforms in enforcement work likely also came from the courts acknowledging variance in which measures coerce laolai into acting on court orders. Someone who rarely travels is unaffected by flight and high-speed rail restrictions, but might feel more pressured to act on a court order if their judgment defaulter status is broadcast to their social media contacts. Courts seemed to consider digital methods of embarrassing judgment defaulters while soliciting public information about them to be efficient and low cost. These practices did not substantially improve court obligation fulfillment rates, yet their combination of deeply integrated back-end data profiling of judgment defaulters and precise targeting of these individuals' real-world social networks is positioned to become a permanent fixture of Chinese legal enforcement.

Investigation of property ownership is one early step courts take in the enforcement process, with the objective of using property holdings as collateral in enforcing judgments. Of late, however, the courts have turned greater attention to digitally held assets as an enforcement target in cases where people do not own real estate or other valuable property. Throughout this transition, the courts homed in on how mobile payment and banking apps swiftly distribute money between individuals, and how fintech companies' privacy policies prohibit information sharing about such transfers. In response, the courts have devised a process wherein they place judgment defaulters' names and state ID information on the "National Unified Judgment Defaulter Information Lookup Website" (全国统一的被执行人信息查询网站).

The Supreme People's Court also runs a "Property Investigation and Control System" (财产查控系统) that local courts can query or create a locally embedded version of, and which grants judges access to an individual's information on real estate holdings, personal vehicle ownership, insurance, and funds stored in WeChat Pay and Alipay accounts. Under this system, judges also have the authority to freeze funds in banking and mobile payment accounts.⁵⁶ Property investigation is noteworthy for being one of at least two steps in the enforcement process where artificial intelligence is advertised as playing an auxiliary role. The other, discussed below, is the public shaming of judgment defaulters using targeted notifications to people in their neighborhoods and social networks.

⁵⁵ 王琦 [Wang Qi]. "强制执行智能化对立法的挑战与回应." ["Challenges and Responses of Intelligence Enforcement to Legislation"].《甘肃政法学院学报》 [Journal of Gansu Political Science and Law Institute]. 2020(1): 12.

⁵⁶ Banks tend to respond to queries placed through the Property Investigation and Control System within 1-3 days, and from 2016-18, national courts were reported to have frozen 299.2 billion RMB worth of funds across 57.46 million judgment defaulter cases. 王琦 [Wang Qi]. "强制执行智能化对立法的挑战与回应." ["Challenges and Responses of Intelligence Enforcement to Legislation"].《甘肃政法学院学报》 [Journal of Gansu Political Science and Law Institute]. 2020(1): 13-14.

Alibaba and the Courts

Technological interventions directed at court enforcement must be contextualized within the state's "smart court" (智慧法院) project. Nested within both the broader national prerogative to become a so-called "AI superpower" and a recent wave of judicial reforms, the government-supported push for smart courts has sparked a variety of applications of artificial intelligence in courtrooms around the country.⁵⁷ The literature on smart courts documents how Chinese startups are supplying technologies for tasks such as natural language processing of court judgment documents, sentencing recommendations, and performance reviews of judges.⁵⁸ Yet even before these developments, more established firms like Alibaba cooperated with courts to strengthen enforcement.

Using the National Unified Judgment Defaulter Information Lookup website, courts can now find judgment defaulters' corresponding bank accounts as well as mobile wallet accounts in Alipay and WeChat Pay to freeze their assets. One scholar found that "According to the statistics of the Supreme Court, from 2016 to September 2018, the national courts provided inquiry and freezing services for 57.46 million cases through the network investigation and prosecution system, freezing a total of 299.2 billion yuan of funds."⁵⁹ Yet an ongoing issue with this rapid turnaround is one where the punishment precedes the notice of legal action; judges have at times been able to freeze accounts before individuals receive notice that they are judgment defaulters.

Starting in 2015, the Zhejiang High People's Court signed an agreement with Alibaba where the company would share data on the receiving addresses that shoppers on the company's e-commerce platform, Taobao, used for package delivery. This enabled the courts to forward legal documents to people they suspected were deliberately evading document service. At the time, the Zhejiang high court reported to Chinese newspaper *The Paper* that it was also able to access individuals' Alipay balances, their account balances in Yu'e Bao (a wealth management product from Ant Financial), and data on their e-commerce activity including average amounts of purchases and most expensive purchases.⁶⁰ Tie-ins with Alibaba and Ant Financial services are crucial to a narrative trope from accounts of judgment defaulters and enforcement. In only telling the stories of reformed judgment defaulters, news reporting on how tech platforms and courts work in tandem to pressure fulfillment of court judgments tend to evoke cautionary tales, such as stories of blacklists whose Sesame Credit scores dropped or who had their spending within Ant Financial's credit card-like

⁵⁷ Stern, Rachel E., M. Roberts, B.L. Liebman, A. Wang. "Automating Fairness? Artificial Intelligence in the Chinese Courts." *Columbia Journal of Transnational Law* 59. (2021): 515.

⁵⁸ Wang, Nu. "'Black Box Justice': Robot Judges and AI-based Judgment Processes in China's Court System," 2020 IEEE International Symposium on Technology and Society (ISTAS). (2020).

⁵⁹ "强制执行智能化对立法的挑战与回应." [Challenges and Responses of Intelligence Enforcement to Legislation.] 王琦 [Wang Qi]. 《甘肃政法学院学报》 [*Journal of Gansu Political Science and Law Institute*]. 2020(1). pp. 14.

⁶⁰ "浙江高院与阿里合作 法律文书寄到淘宝收货地址" ["Zhejiang High Court and Alibaba Cooperate, Legal Documents Mailed to Taobao Receiving Addresses"]. Sohu. November 24, 2015. <http://news.sohu.com/20151124/n427933546.shtml>.

Huabei payment service restricted.⁶¹ Aside from sharing financial data and addresses for court document service, Alibaba has also delved into a more evaluative role to assist the courts.

Alibaba developed cloud services and deep learning-driven case comparison software for Chinese courts' use. The company created a "smart enforcement system" (智慧执行系统) for the Wuxi Intermediate People's Court in 2018, which purportedly "uses big data mining technology to intelligently analyze judgment defaulters' consumption habits and behavior patterns, to make scientific judgments of whether or not they have the ability to fulfill [court orders], and to discover hidden clues about [their] property in a timely manner."⁶² Data on judgment defaulters' taxes, social relations, property transfers, and consumption habits are tapped to create a report for judges to use in determining the crucial legal detail of an individual's *ability to perform* (履行能力) on a court judgment—often translating to the financial ability to pay a monetary penalty.⁶³

The *People's Court Daily* newspaper claimed the use of Alibaba's smart enforcement platform shortened the time for filing court enforcement paperwork from thirty minutes to two, and that the Wuxi court had a partnership with three mobile phone service operators (China Mobile, China Telecom, and China Unicom) who facilitated electronic service of court documents. The same system also has a hotline and online means for informants to report "clues" (线索) about judgment defaulters' whereabouts and assets held, and distributes information about rewards for informants via Chinese social media including WeChat, Weibo, and QQ.⁶⁴ The "smart enforcement

⁶¹ "法院持续加大失信被执行人惩戒力度" ["Courts Continue to Expand Severity of Punishment for Judgment Defaulters"].《法制日报》[Legal Daily]. August 16, 2017.

<http://www.zx0472.com/news/show-32028.html>; "浙江高院与阿里合作 法律文书寄到淘宝收货地址" ["Zhejiang High Court and Alibaba Cooperate, Legal Documents Mailed to Taobao Receiving Addresses"]. Sohu. November 24, 2015. <http://news.sohu.com/20151124/n427933546.shtml>. Defaulting on commercial loans issued by tech companies has on some occasions caused borrowers to become judgment defaulters. JD's fintech subsidiary turned to the courts to place restrictions on its users who failed to repay loans, yet there has been no reporting of competitors such as Ant Financial taking similar steps. "欠钱不还成'老赖', 过年回家遇上大麻烦!" ["If You Don't Repay and Become a Laolai, Returning Home for the New Year Will Be a Hassle!"]. Xinhua. January 19, 2020. http://www.xinhuanet.com/tech/2020-01/19/c_1125480931.htm.

⁶² Original text "运用大数据挖掘技术, 对失信被执行人消费习惯和行为规律进行智能分析, 对其是否具有履行能力进行科学判断, 及时发现隐匿的财产线索," from "无锡中院: 打造'智慧执行系统' 决战基本解决执行难." ["Wuxi Intermediate Court: Create a 'Smart Execution System' to Fundamentally Solve Enforcement Challenges"]. Sohu. November 6, 2018. https://www.sohu.com/a/273667577_117927.

⁶³ 周凌如、李昭菲 [Zhou Lingru, Li Zhaofei]. "长沙中院搭建大数据分析平台 给老赖织了一张天网" ["Changsha Intermediate Court Built a Big Data Analysis Platform, Weaved a Skynet for Lao Lai"].《潇湘晨报》[Xiaoxiang Morning News]. March 27, 2019. <http://hunan.voc.com.cn/mobile/article/201903/201903270912532326.html>.

⁶⁴ "打造'智慧执行系统' 决战基本解决执行难" ["Creation of 'Smart Enforcement System' Is Decisive Battle in Fundamentally Solving the Enforcement"].《人民法院报》[People's Court Daily]. November 6, 2018. http://rmfyb.chinacourt.org/paper/html/2018-11/06/content_145295.htm?div=-1;

顾敏、浦敏琦 [Gu Min, Pu Minqi]. "无锡借力大数据抓'老赖'" ["Wuxi Leverages Big Data to Catch 'Laolai'"]. Xinhua. July 18, 2018. <https://bigdata.huangniu.com/article/9CaKrnKaw1C>; "让执行变轻松 无锡法院首创智慧执行系统" ["Wuxi Court's First Smart Execution System Makes Enforcement Easier"]. 最高人民法院 [Supreme People's Court]. July 17, 2018. <http://www.cecc.org.cn/m/view/id/528137>.

system” also handles later stages of the enforcement process, such as storing impounded vehicles and managing auctions of seized assets through Alibaba’s online auction platform (阿里拍卖).

In 2019, courts in Changsha (Hunan) adopted Alibaba’s smart execution system.⁶⁵ Other accounts of the smart execution system and its integration with Alibaba’s online auction platform suggest an exchange where Alibaba can use data the courts share with these platforms for research to refine its products. In the city of Anyang (Henan) this kind of research was reportedly used for developing mobile app services for court auctions and to assist judges in enforcement work.⁶⁶ Some of the data Alibaba’s smart enforcement system has been reported to collect indicate the invasive nature of the software’s monitoring capabilities. In Changsha, for instance, local news claimed the system could not only monitor travel records of judgment defaulters, but also those of their children.⁶⁷

Media coverage of Alibaba’s smart enforcement platform leaves critical questions unaddressed, such as regarding the algorithmic design choices in determining judgment defaulters’ ability to pay court fines. The potential for these systems to output predatory, overly punitive decisions remains unknown, as does if and how the courts conducted validation testing prior to installing these systems. A related set of concerns arise when tech platforms shift their focus from assessment to publicization and shaming of judgment defaulters.

Targeted Public Shaming

Several local courts have experimented with interactive maps as a means of simultaneously publicly shaming judgment defaulters and informing members of the public about where judgment defaulters work and live. In 2017, the Yuzhou County court in Lanzhou (Gansu) claimed to use AI for distributing map pop-ups to local Internet users, displaying on-screen boxes that listed names, photos, gender, age, state ID numbers, enforcement performance status, and household registration (户籍) information for judgment defaulters within the court’s jurisdiction. News reporting claimed that the court partnered with Tencent to ensure specific judgment defaulters’ information were also posted to local WeChat users’ WeChat Moments feeds.⁶⁸

⁶⁵ “长沙法院联手阿里巴巴打造‘智慧执行’新模式” [“Changsha Court Partners With Alibaba to Create a New Model of ‘Smart Enforcement’”]. 《湖南日报》 [Hunan Daily]. March 28, 2019. https://k.sina.cn/article_2288064900_8861198402000k2wk.html.

⁶⁶ “河南省安阳市北关区法院:打造‘智慧法院’用科技解决‘执行难’” [“Beiguan District Court, Anyang City, Henan Province: Build a ‘Smart Court’ to Solve ‘Enforcement Challenges’ with Technology”]. 《法制日报》 [Legal Daily]. January 20, 2020. http://www.legaldaily.com.cn/index/content/2020-01/20/content_8105946.htm.

⁶⁷ 周凌如、李昭菲 [Zhou Lingru, Li Zhaofei]. “长沙中院搭建大数据分析平台 给老赖织了一张天网” [“Changsha Intermediate Court Built a Big Data Analysis Platform, Weaved a Skynet for Lao Lai”]. 《潇湘晨报》 [Xiaoxiang Morning News]. March 27, 2019. <http://hunan.voc.com.cn/mobile/article/201903/201903270912532326.html>.

⁶⁸ “榆中县法院举办法院开放日活动并召开审判执行工作新闻发布会.” [“Yuzhong County Court Held Court Open Day Activities and a Press Conference on Trial Enforcement Work”]. 《信用中国》 [Credit China]. December 19, 2019. https://credit.lanzhou.gov.cn/323.news.detail.dhtml?news_id=9683.

From 2016-2019, “laolai exposure platforms” (老赖曝光平台) cropped up to socially pressure judgment defaulters in conjunction with restrictions on their movements and consumption. The courts and Chinese news media justify this shaming mechanism as helping courts track people down and get them to pay off their court fines, while also deterring them and others from breaking the law. The courts frame these measures as educating the public about court enforcement, and part of that education is to inflate the public’s disgruntlement with people who evaded punishment for theft and traffic accidents. Wang Zhan, a judge from the enforcement bureau of a court in the city of Nanyang, explained the rights that judgment defaulters lose: “the courts are not willing to expose any citizen’s privacy, except for [that of] laolai who refuse to comply with the courts’ effective judgments.”⁶⁹

Comparing judgment defaulters to “rats crossing the street” (让老赖像过街老鼠一样), one article explicates how custom dial tone messages alert people who are trying to telephone judgment defaulters of these individuals’ unfulfilled court obligations. While the caller waits for the blacklisted person to pick up the phone, a recording notifies them that the person they are trying to reach is on a court blacklist, and asks them to encourage the person to fulfill their court obligations. Since 2017, courts in Huangshi, Zibo (Shandong) and Guanyun (Jiangsu) were among those early to instate this form of cooperation with telecommunications companies. These firms’ buy-in is pivotal to thwarting evasion efforts: even if a judgment defaulter changes their real-name registered phone number, the dial tone message carries over to the new number.⁷⁰ While this mechanism relies on relatively straightforward targeting, court partnerships with news and social media apps go one step further in shaming judgment defaulters in ways designed to reach people in their communities who are not trying to contact them.

Toutiao (今日头条, lit. “today’s headlines”) is a ByteDance-owned news aggregator app with a broad user base across China. A scattered set of court enforcement partnerships the company has launched exemplify how function creep can repurpose technology originally used for one narrow set of purposes into a broader, potentially more harmful one. Launched in 2016, Toutiao Xunren (头条寻人), Toutiao’s program for tracking down missing, trafficked, and kidnapped people soon became the biggest of these services in China, tracing over 4,000 people’s whereabouts in its first two years.⁷¹ Although Alibaba partnered with police stations even earlier on a similar platform known as Tuanyuan (团圆, “reunion”), and other tech firms have tied into this

⁶⁹ 冀天福 [Ji Tianfu]. “当了网红的‘老赖’——河南高院‘老赖’网络曝光平台工作探访” [“The ‘Laolai’ Who Became an Internet Celebrity——Henan High Court’s Work Visit to Online ‘Laolai’ Exposure Platform”]. 《人民法院报》 [People’s Court Daily]. September 8, 2017. http://rmfyb.chinacourt.org/paper/html/2017-09/08/content_129953.htm?div=-1.

⁷⁰ “法院持续加大失信被执行人惩戒力度” [“Courts Continue to Expand Severity of Punishment for Judgment Defaulters”]. 《法制日报》 [Legal Daily]. August 16, 2017. <http://www.zx0472.com/news/show-32028.html>.

⁷¹ Hersey, Frank. “China’s most popular apps are also helping find the country’s missing people.” TechNode. December 26, 2017. <https://technode.com/2017/12/26/chinas-popular-apps-also-help-find-missing-people/>.

platform to issue notices similar to AMBER alerts in the United States, Toutiao appears to have been the main collaborator with numerous courts across China.

Courts have their own official accounts within Toutiao, akin to an official Twitter account, where they can upload information about judgment defaulters including name, hukou registration, partial state ID number, state ID photo, a short description of why the person is a judgment defaulter, and information related to the enforcement such as the enforcing court, related documents, and the status of the enforcement order.⁷² From there, Toutiao allegedly applies AI-powered distribution methods to the judgment defaulter's contact list and uses location data to construct a "friends circle" of the judgment defaulter's acquaintances who also live within the vicinity of the judgment defaulter's residence.⁷³ These people are then sent pop-up notifications within the app alerting them that the judgment defaulter they know is on a court blacklist.

Toutiao's judgment defaulter exposure partnerships may differ slightly between implementing courts, but all send notifications within the Toutiao app itself. Nanning, Guangxi signed a cooperative agreement with Toutiao in 2017, where the courts would send judgment defaulters' information including addresses to Toutiao, and notifications about these blacklisted individuals would appear within the app's "Toutiao Fugitives" (头条追逃) feature for people in their vicinity.⁷⁴ Toutiao signed similar agreements in the city of Haidong (Qinghai)⁷⁵, Shangqiu (Henan)⁷⁶, and in Ningxia province.⁷⁷ In some cities, notifications are sent to the judgment defaulter's close contacts within a 20 kilometer radius or to every Toutiao user within 10-20 kilometers of the judgment defaulter's home address.⁷⁸

⁷² “想赖账？头条推送！全国首家省级‘老赖网络曝光’平台启动” [“Thinking of Defaulting? Pushed to Toutiao! Country's First Province-Level 'Online Laolai Exposure' Platform Launched”]. 《环球网》 [Global Times]. August 19, 2017. <https://china.huanqiu.com/article/9CaKrnK4Mji>.

⁷³ “河南今年2168人被判拒执罪 开通‘老赖网络曝光’平台” [“In Henan 2,168 People Were Convicted of Refusing Enforcement This Year, 'Online Laolai Exposure' Platform Opened”]. Sina. August 18, 2017. <http://news.sina.com.cn/s/2017-08-18/doc-ifykcgav9889903.shtml>.

⁷⁴ “南宁青秀法院与今日头条签追逃公益项目协议” [“Nanning, Qingxiu Court Signed Agreement on Public Welfare Project with Toutiao”]. 《中国法院网》[China Court]. January 29, 2018. <https://www.chinacourt.org/article/detail/2018/01/id/3187297.shtml>.

⁷⁵ “海东中院与今日头条合作 利用‘弹窗’追查‘老赖’” [“Donghai Intermediate Court and Toutiao Cooperate, Use 'Pop-up Windows' to Track Down 'Laolai'”]. 《信用中国》[Credit China]. January 3, 2018. https://www.creditchina.gov.cn/home/dianxinganli/201801/t20180102_105448.html.

⁷⁶ 刘珂 [Liu Ke]. “河南商丘：今日头条显威力，‘老赖’主动把钱还” [“Shangqiu, Henan: Toutiao Shows Force, Laolai Takes Initiative to Repay”]. 河南省商丘市睢阳区人民法院 [Henan Province Shangqiu City Suiyang District Court]. August 15, 2019. <http://jszx.court.gov.cn/2050/ExecuteNewsletter/233969.jhtml>.

⁷⁷ “兴庆区法院借助网络攻坚执行失联‘老赖’主动现身还款” [“Xingqing District Court Relies on Internet for Enforcement, 'Laolai' Take Initiative to Repay”]. 《信用中国》[Credit China]. October 23, 2019. <http://credit.tjd.gov.cn/401/18028.html>.

⁷⁸ “烟台中院人工智能技术曝光老赖：住所地周围邻居或收到推送” [“Yantai Intermediate Court's Artificial Intelligence Technology Exposes Laolai: Neighbors May Receive Push Notifications.”] 《澎湃》 [ThePaper]. May 10, 2017.

https://www.thepaper.cn/newsDetail_forward_1681877; 郝绍彬 [Hao Shaobin]. “精准曝光‘老赖’值得借鉴探索” [“Accurate Exposure of 'Laolai' Worth Learning From and Exploring”]. 《人民法院报》 [People's Court Daily]. May 28, 2017. http://rmfyb.chinacourt.org/paper/html/2017-05/28/content_125984.htm?div=-1.

According to the Toutiao representative heading up the partnership, "This measure raises the courts' transparency level."⁷⁹ Despite this claim, the courts and media are intransparent about the efficacy of this method of pressuring judgment defaulters, and about the level of engagement "laolai exposure platforms" have generated thus far. In Hefei (Anhui), the Luyang District court partnered with Toutiao to publicize judgment defaulters' information to people within a 5 kilometer radius, reportedly garnering 500 comments and reposts (a figure presented without disaggregating these two forms of interaction with the posts).⁸⁰ In some cases intermediaries manage these partnerships, such as the Henan high court relying on media company Yufa Yangguang (豫法阳光新媒体) to partner with Toutiao.⁸¹ The exact role of the intermediary and its access to the data used to expose judgment defaulters is unclear.

Other platforms have experimented on a smaller scale with using advertisements and maps to pressure and shame judgment defaulters. In Nanning (Guangxi) the Bytedance-owned app Douyin—the original Chinese version of the app known as TikTok outside of China—displayed ads between videos that contained individual judgment defaulters' state ID photos and offered rewards for tip-offs about their whereabouts. As with Toutiao, these ads were geographically targeted at the neighborhoods and communities where these judgment defaulters lived, to maximize the potential that these people would "lose face" (丢脸) and be coerced to fulfill their court orders. A court in Shijiazhuang (Hebei) took a related approach when through a WeChat mini-program (a small program accessible within WeChat, akin to an applet) of a "laolai map." Focusing on one neighborhood of Shijiazhuang, the "laolai map" was dotted with icons a user could tap on to reveal information on where judgment defaulters lived alongside information about why they were blacklisted.⁸²

Although courts and news media tout "laolai exposure platforms" as solving enforcement difficulties, statistics on the success of these programs are underwhelming. A year into Henan's partnership with Toutiao, local news reported an 8% success rate.⁸³ Furthermore, the courts minimally address the civil liberties concerns around whether these methods of raising enforcement compliance are acceptable, possibly in part because judgment defaulters' lived experiences of this state-sanctioned wresting away

⁷⁹ "今日头条与河南高院合作一周年 成功促使207名失信人还款" ["First Anniversary of Toutiao's Cooperation with Henan High Court, Successfully Prompting 207 Trust-Breakers Repay"]. Sohu. September 6, 2018. https://www.sohu.com/a/252467810_533828.

⁸⁰ "庐阳法院：惩戒失信再升级 头条弹窗精确曝光'老赖'" ["Luyang Court: Punishment for Judgment Defaulters Upgraded, Toutiao Pop-up Windows Accurately Expose 'Laolai'"]. 合肥市庐阳区人民法院 [Hefei City Luyang District People's Court]. December 18, 2017. http://luyang.gov.cn/sitecn/News_Info1.aspx?columnid=1395&id=3167.

⁸¹ "河南推进智慧法院建设" ["Henan Promotes Smart Court Construction"]. Cyberspace Administration of China. August 7, 2017. http://www.cac.gov.cn/2017-08/07/c_1121440813.htm.

⁸² Sun, Xinmei. "'Deadbeat Map' shows which people around you are on a financial blacklist." South China Morning Post. January 17, 2019. <https://www.scmp.com/abacus/tech/article/3029105/deadbeat-map-shows-which-people-around-you-are-financial-blacklist>.

⁸³ Out of 2,592 judgment defaulters publicized on Toutiao, 207 paid off their court debts. 陈薇 [Chen Wei]. "'老赖曝光平台'开通一年 207名失信被执行人履行义务" ["One Year After Opening Laolai Exposure Platform, 207 Dishonest People Subjected to Enforcement Fulfilled Their Obligations"]. 《河南商报》 [Henan Business Times]. September 7, 2018. <https://jr.dahe.cn/2018/09-07/372000.html>.

of privacy has been difficult to document. News outlets tend to describe two main reactions from judgment defaulters: embarrassment at having been exposed to their peers as “deadbeats,” and rapid paying off of court fines to clear their names. In one, a business owner who did not pay his employees when his business was failing allegedly pulled out his mobile phone, saw a push notification about himself as a *laolai*, implored friends to check if they received the same notification, and rushed to settle his court debt. The story quotes him as reflecting, “At the time, I didn’t understand. I always felt that I was losing money, and it didn’t matter that I temporarily owed money. Thinking about it now, my debt is a burden I should not let other people carry for me.”⁸⁴ Similar “success stories” from Henan’s partnership with Toutiao included media portrayals of an employer who had not paid his workers’ wages receiving calls from family and friends urging him to pay off his court fines, and a divorced man being pressured to make up for unpaid child support.⁸⁵

Very few foreign newspapers have managed to interview judgment defaulters, though some have featured examples of people who felt they were wrongfully blacklisted due to clerical and other errors.⁸⁶ Much of the misreporting on blacklisting in foreign media has inadvertently revealed that interviewed judgment defaulters themselves often do not understand the legal bases behind the reasons why they were blacklisted or the procedures required to remove themselves from blacklists, suggesting a need to better educate the public about this facet of administrative law in China. While judgment defaulters are stripped of their right to privacy, the people encouraged to pass information about them on to the courts are granted some degree of anonymity and protection. This element of court enforcement draws from prior practices of stigmatization on- and offline in China that have had mixed results at best. It also demonstrates how performative acts of building social trust on a national or provincial level can erode more local and interpersonal bonds of trust between citizens.

Turning Citizens into Informants

Digital presentations of blacklist entries easily embed rewards for reporting tips about judgment defaulters’ activities. In prioritizing the creation of a tighter dragnet for court enforcement, the state neglected the unintended consequences of these interventions that pit informants against their fellow citizens, and that remain

⁸⁴ “当了网红的‘老赖’——河南高院‘老赖’网络曝光平台工作探访” [“The ‘Laolai’ Who Became an Internet Celebrity——Henan High Court’s Work Visit to Online ‘Laolai’ Exposure Platform”]. 冀天福 [Ji Tianfu]. 《人民法院报》 [People’s Court Daily]. September 8, 2017. http://rmfyb.chinacourt.org/paper/html/2017-09/08/content_129953.htm?div=-1.

⁸⁵ 冀天福 [Ji Tianfu]. “当了网红的‘老赖’——河南高院‘老赖’网络曝光平台工作探访” [“The ‘Laolai’ Who Became an Internet Celebrity——Henan High Court’s Work Visit to Online ‘Laolai’ Exposure Platform”]. 《人民法院报》 [People’s Court Daily]. September 8, 2017. http://rmfyb.chinacourt.org/paper/html/2017-09/08/content_129953.htm?div=-1.

⁸⁶ Vanderklippe, Nathan. “Chinese blacklist an early glimpse of sweeping new social-credit control.” The Globe and Mail. January 3, 2018. <https://www.theglobeandmail.com/news/world/chinese-blacklist-an-early-glimpse-of-sweeping-new-social-credit-control/article37493300/>.

under-studied today. Rewards seem to be issued sparingly, and often in cases where large sums of money are involved. In Beijing, the Xicheng district court issued announcements that for one case where the group of judgment defaulters involved owed 1.29 million RMB, the courts would offer a reward of 10% of this amount to people able to help the courts apprehend them by providing information about these individuals' property ownership and current location.⁸⁷ Toutiao's 2018 judgment defaulter information exposure partnership with Ningxia's Xingqing district court included "Worry-Free Enforcement" reward insurance ("执行无忧"悬赏保险). Under this scheme, the party to sue the person or group that has ultimately defaulted on a judgment can apply for the courts to offer rewards for apprehending the judgment defaulter.

Statistics on what proportion of the total number of people penalized through these digital shaming and informant schemes ultimately fulfill court obligations can be hard to trace. Among roughly 1,300 people to be publicly shamed in the Yuzhong (Lanzhou) court system in 2019, only sixteen reward announcements were issued.⁸⁸ These reward notices can have wide reach, however, as the example of a Mr. Huang who became a judgment defaulter over unpaid labor contracts in Yuzhong demonstrates. The Yuzhong court was able to push the reward announcement to 330,000 people in Taizhou (Jiangsu), over 1,000 miles away, through WeChat Friends Circles. One report emphasized that Tencent was able to bump the notification about Mr. Huang's blacklist status and reward for information about him higher up in users' WeChat Moments feeds to raise the chances that people who received the notification would look at it.⁸⁹

These reward systems hint at how, despite the technological incursions to try to resolve enforcement challenges, the state must still rely on citizens to conduct last-mile informant work within their communities. The technologies of the court enforcement apparatus are ultimately not as powerful as outside observers thought—or as the state wants them to believe. Government officials often cast this technological solutionism as necessary for building social trust, tacitly referring to citizens' trust in state institutions. Yet they ignore the knock-on effects these practices may have of eroding trust between citizens and within communities. In surveying other internet-era shaming practices such as the bottom-up "human flesh search" all the way through tech companies' recent efforts to build "snitch apps" for reporting minor local transgressions, it becomes apparent that many features of judgment defaulter shaming are neither unique to the

⁸⁷ "西城发悬赏公告 提供这8个'老赖'线索最高奖129万" ["Xicheng Issued Announcement of Maximum Reward of 1.29 Million RMB to Provide Clues About These 8 'Laolai'"].《环球网》[Global Times]. August 30, 2018. <https://m.huangqiu.com/article/9CaKrnKc1xl>.

⁸⁸ "榆中县法院举办法院开放日活动并召开审判执行工作新闻发布会." ["Yuzhong County Court Held Court Open Day Activities and a Press Conference on Trial Enforcement Work"].《信用中国》[Credit China]. December 19, 2019. https://credit.lanzhou.gov.cn/323.news.detail.dhtml?news_id=9683.

⁸⁹ "欠债不还 你或将成为朋友圈的'名人' ——榆中法院微信朋友圈定向精准打击'老赖'" ["If You Don't Pay Your Debts, You May Become a 'Celebrity' in Your WeChat Friends Circles—Yuzhong Court's WeChat Moments Used for Targeted Attacks on 'Lao Lai'"]. 甘肃榆中法院网 [Gansu Yuzhong Intermediate Court Web]. October 19, 2018. <http://yzxfy.cncourt.org/public/detail.php?id=1400>.

social credit system nor are they likely to be contained within that state project alone in the years to come.

Although the Chinese internet vigilantism of “human flesh search” (人肉搜索, hereafter HFS) did not come up in my fieldwork, a brief history of HFS reveals how the state responded to some of the problems the social credit system is still struggling to tackle today. Named for the flesh-and-blood human beings who became targets of online communities’ vengeance, HFS is the phenomenon in which Chinese internet users seized upon perceived instances of an individual’s or group’s illegal or immoral behavior, and banded together to conduct online and offline information-gathering about these people’s lives in order to punish them for their misdeeds. Famous examples involved marital infidelity, animal cruelty, sexual harassment, and government officials abusing their power. Mainstream media coverage and state apprehension of a portion of these HFS targets led to wry observations that HFS served as unpaid labor in which the Chinese public did the government’s and the press’ work for free.⁹⁰ Heilmann’s “experimentation under hierarchy” framework suggests the CCP tolerated HFS because it showed the state where popular frustrations coalesced, and where to test out localized rules to resolve these problems. Notably, case study research on numerous HFS incidents found no examples targeting the central government.⁹¹

It is tempting to claim that judgment defaulter blacklisting and dissemination of blacklist information via news media and online platforms is a direct descendant of HFS, or is the state’s delayed uptake of the accountability labor HFS encapsulated. Blacklisting and joint disciplinary measures target the government itself as one of the four types of entities the social credit system covers. Many Chinese critics are skeptical, however, that assessments of government and legal institutions will ever be as thoroughly operationalized as those focusing on individuals and businesses. They are wary that without the former two entities being fully accountable under the social credit system, oversight of the latter two loses credibility.

Other similarities between HFS and social credit nonetheless point to unresolved issues in these types of transparency and accountability projects, such as their elision of illegal and immoral behavior. In some cases, HFS investigations ended in law enforcement and the courts stepping in and acting on these leads to dole out punishment, whereas judgment defaulter blacklists and their corresponding external publicity amplify public pressure on individuals who are already subjected to the penalties a judge has determined. Attempts to regulate HFS grappled with the

⁹⁰ For instance, in one HFS case where a group of government officials’ travel expense claims revealed excessive spending on tourism on a “study tour” of the United States and Canada, Chinese Internet users mobilized to petition the officials’ local government. The officials were fired. Gao, Li and James Stanyer. “Hunting corrupt officials online: the human flesh search engine and the search for justice in China.” *Information, Communication & Society* 17, no. 7. (2014): 815. Regarding journalism, Dong Han argues that news media outlets picked up popular HFS stories because a surge of interest in them suggested that the state did not consider them too sensitive to take down, and an upswell in online commenting and further information-gathering might ensure higher news readership, as well. Han, Dong. “Search boundaries: human flesh search, privacy law, and internet regulation in China.” *Asian Journal of Communication* 28, no. 4. (2018): 437.

⁹¹ Gao, Li and James Stanyer. “Hunting corrupt officials online: the human flesh search engine and the search for justice in China.” *Information, Communication & Society* 17, no. 7. (2014): 826.

reputational and privacy harms that ensued, yet in the case of judgment defaulter blacklists, these harms are seen as crucial to making the practice of sharing blacklist information effective. The slow buildup of concern around how to ensure judgment defaulters retain rights to privacy and reputation may lead courts to realize that regardless of whether judgment defaulters were members of vulnerable groups before they earned this legal status, they nonetheless come to constitute a socially vulnerable group *after* they are blacklisted and this information is shared with the public. The public shaming mechanisms that are designed to pressure them into fulfilling their court obligations may give rise to social phenomena the state cannot fully control. Finally, whereas the motivations of the ordinary people powering HFS were decipherable from their social media commentary, it is unknown how people who provide information about judgment defaulters consider the trade-offs between reward money and potentially subjecting someone they personally know to punishment from the state.

In addition to concerns about courts being unable to control how judgment defaulter data are interpreted and used once they're released via social media, a conversation that Chinese legal experts have yet to address involves the fracturing of social trust that can emerge in the aftermath of initiatives that spur people to inform courts about blacklisters with whom they have a personal relationship. How might being branded as a *laolai* in one's WeChat Circles carry lasting reputational fallout, lingering on in the memories of a blacklisted person or their peers?

On the informant side, Levy and Kilgour's framing of "surveillance deputies" encompasses the type of labor the courts are attempting to outsource to citizens. Governments enlist citizens as informants, whereas these deputized citizens in turn may reap ideological, financial, and vengeful rewards from participating. An example of surveillance deputization to come out of China in recent years was a short-lived partnership between local governments and major tech firms to create so-called "snitch apps."⁹² Within these, citizens could file reports on their neighbors for a hodgepodge of misbehaviors such as traffic violations, leaking pipes, and domestic disputes, and in some instances could receive rewards from partnering tech firms, such as discounts on ride-hailing or music streaming, as well as cash rewards and mobile phone data. Yet many Chinese citizens were either uninterested or refused to participate, and mention of these apps has since faded away in the media.

Surveillance deputization is relevant for framing the enforcement-related rewards schemes Chinese courts have hatched in two particular ways: 1) it tends to be put into practice when the state is low on resources and believes citizens may be more effective than government agencies at addressing a type of illegal behavior; and 2) it "bootstraps interpersonal concerns into the state surveillance apparatus,"⁹³ which in China could threaten long-standing social ties, or *guanxi* (关系), that have filled cracks in interpersonal trust. In a country with strict limits on civil society, communities of

⁹² Page, Jeremy and Eva Dou. "In Sign of Resistance, Chinese Balk at Using Apps to Snitch on Neighbors." Wall Street Journal. December 29, 2017. <https://www.wsj.com/articles/in-sign-of-resistance-chinese-balk-at-using-apps-to-snitch-on-neighbors-1514566110>.

⁹³ Unpublished Privacy Law Scholars Conference 2020 paper.

faith, and other outlets for non-state and non-market trust-building, *guanxi* is critical for a swath of social interactions and institutions to function. On the flip side, it can breed corruption and favoritism. While state propaganda treats reporting on judgment defaulters' whereabouts and circumstances as a form of social responsibility, they fail to address the possibilities that informants might act in bad faith.

The rhetoric around the need to combat welfare fraud in the United States parallels that used to justify the social credit system in China. Both craft an image of selfish individuals who take advantage of the state's benevolence at the expense of two sets of victims: the national economy and the other members of a purported law-abiding, deserving society. Regardless of how much money is recouped or how these funds are used, both systems accrue legitimacy when they make a show of clamping down on welfare fraud and judgment defaulters. In the United States, some states even receive a portion of the reclaimed benefit dollars as a reward.⁹⁴ In China, it remains unclear what motivates courts from different localities to develop certain strategies for turning citizens into surveillance deputies. To date, it appears that mostly intermediate courts are offering rewards to citizens for information about judgment defaulters.

Surveillance deputization as a response to court enforcement problems reveals gaps in the courts' capacity that collaborations with tech firms can only partially fill. Courts can access judgment defaulters' home addresses through Alibaba; can shame judgment defaulters via Toutiao, WeChat, and QQ-distributed advertisements and pre-recorded messages for incoming callers in lieu of dial tones; can use digital ads to incentivize judgment defaulters' friends, family, and community members to inform on them for financial rewards; and can block judgment defaulters from using online platforms to facilitate certain forms of transportation, employment, and consumption. Despite all this, there are still judgment defaulters. Rather than trying to understand why this problem persists, critics within China are still committed to technological solutionism for the enforcement problem, albeit while questioning its legal limits.

No policies have outlined steps for mitigating reputational and other harms that may occur as a result of blacklist data being sold or otherwise shared beyond state-sanctioned channels. Hypothetical examples of how blacklist data can take on this second, even more potent shaming function include their use in private sector data analytics involving employment or education, and their being indexed in Chinese search engines such as Baidu and Sougou. In the first instance, it is illustrative to return to the Sesame Credit example. Ant Financial incorporates whether or not an individual user's name is on a court judgment defaulter blacklist as one input into its Sesame Credit scoring model, deducting points for known judgment defaulters and prohibiting them from making certain purchases (e.g., high-speed rail and airline tickets) using Alipay. Blacklisting data could also serve the company beyond the period of time in which the user is blacklisted. If the firm finds that being on a blacklist is predictive of other behaviors, such as inability to pay bills on time, or profligate spending on certain types of products, there is currently no legal constraint to retaining this historical data

⁹⁴ Headworth, Spencer. "Getting to Know You: Welfare Fraud Investigation and the Appropriation of Social Ties." *American Sociological Review* 84, no. 1. (2019): 175.

as an input for models predicting users' future behavior. Similarly, regardless of whether or not other companies have signed memoranda of understanding with the NDRC, they could in theory access publicly available blacklist data for business purposes.

The categorization of blacklist data as "public credit information" could lead to its reappropriation if third parties were to scrape court websites and incorporate these data into other services. The controversies surrounding tenant screening services' use of housing court data in the United States provides a forewarning of how this one classification could reverberate within other areas of blacklisters' lives. The mere indication that a tenant had been involved in a housing court case, regardless of whether they or the landlord was found to be at fault, was the data point used to assess their suitability in a background check for rental housing.

Similarly, the aftermath of repurposed mugshots in the United States offers a telling example of how much more powerful this type of record becomes once it can be amplified online. Mugshots are taken after a person is arrested and can be accessed online, yet they do not indicate whether or not the person was released or convicted for a crime. Private companies such as Just Mugshots and Mugshots.com have taken advantage of this ambiguity by cataloging mugshots and their corresponding identification information.⁹⁵ When individuals seeking information about a potential employee, first date, babysitter, or other stranger looks that person's name up via a search engine, they can retrieve the person's mugshot on one of these websites and potentially make flawed assumptions about the person's criminality based on the lack of additional information. Mugshots are also often circulated via Twitter, Facebook Crime Watch pages, and local newspaper websites. Mugshot websites' business model involves charging extortionate fees to have the data removed—a Sisyphean task for the subjects of these photos compounded by the financial vulnerability of many people desperate to cast off this social stigma.⁹⁶

Google eventually modified its search algorithm so that mugshot websites would not appear on the first page of results for searches of individuals' names. Companies facilitating the payment for removal of online mugshots (including PayPal and American Express) later severed ties with these websites. Yet the ongoing practices of sharing mugshots via these websites and social media continues to pose a barrier to work and social opportunities for many Americans. China has had a complicated history of shutting down illegal data broker-like activities including highly invasive background search services. If blacklist data were to be commercially repurposed in a similar way, common privacy-preserving responses such as implementing right to be forgotten protections and "data sanitization" measures to rid data of personally identifying properties may be insufficient to restrain some of the negative externalities inherent to third-party use of blacklist data.

⁹⁵ Segal, David. "Mugged by a Mug Shot Online." New York Times. October 5, 2013. <https://www.nytimes.com/2013/10/06/business/mugged-by-a-mug-shot-online.html>.

⁹⁶ Lageson, Sarah E. "Digital Punishment's Tangled Web." Contexts. March 17, 2016. <https://contexts.org/articles/digital-punishments-tangled-web/>.

The arguments critics in China have raised regarding blacklisting take on a slightly different nature than my critique, in that they questioning how blacklisting practices may violate pre-existing Chinese laws. Legal scholar Wang Qi has investigated allocation of responsibility if a digital property investigation system produces an error that could lead a judge to freeze assets or impose some other kind of restriction on the wrong person. Should the court or the company that designed the technology be held accountable? In practice, what processes are in place to detect such an error? Wang sums up the conundrum by noting that “If every update of the algorithm results in the revision of the law, it will damage legal authority. Therefore, we must try our best to insert relatively mature algorithms into smart execution systems.”⁹⁷ Much of the critique around the digitization of court enforcement work follows this pattern of pinpointing specific problems and areas of concern, yet offering vague solutions to meet these challenges. One of the more concrete attempts at accountability comes from an external audit system for court enforcement work.

Not all errors in enforcement can be attributed to technology. In some cases, disagreements and miscommunications between one court that designates an individual as a judgment defaulter and another court that is “entrusted” (委托) with enforcing civil penalties on the judgment defaulter have led to court orders not being enforced or being wrongfully enforced. Thus courts’ enforcement work is itself is subject to third-party evaluations through the “Third Party Evaluation Index System” (第三方评估指标体系) that addresses “basic resolution of enforcement challenges” at all four levels of Chinese courts (SPC, Higher People’s, intermediate, and grassroots).⁹⁸ Efforts for the SPC to build and test out third-party evaluations in conjunction with scholars, think tanks including the Chinese Academy of Social Sciences, and newspapers such as the *People’s Daily* stretch back to at least 2016.⁹⁹ All higher people’s courts, along with a random sample of 30% of intermediate courts, undergo an evaluation including questionnaire surveys of lawyers and people who have been through the court system, and draw from additional data sources including case files, court websites, and courts’ self-reported materials.¹⁰⁰

⁹⁷ 王琦 [Wang Qi]. “强制执行智能化对立法的挑战与回应.” [“Challenges and Responses of Intelligence Enforcement to Legislation”].《甘肃政法学院学报》[Journal of Gansu Political Science and Law Institute]. 2020(1): 20.

⁹⁸ “‘基本解决执行难’第三方评估指标体系调整三个核心指标适用一票否决” [“Fundamentally Resolve Enforcement Challenges, Third-Party Evaluation Index System’s Adjustment of Three Core Indicators Applies One-Vote Veto”].《中国法院网》[China Court]. May 26, 2018. <https://www.chinacourt.org/article/detail/2018/05/id/3318507.shtml>.

⁹⁹ Indicator categories include “standardized enforcement” (规范执行) and “sunshine enforcement” (阳光执行). 王琦 [Wang Qi]. “强制执行智能化对立法的挑战与回应.” [“Challenges and Responses of Intelligence Enforcement to Legislation”].《甘肃政法学院学报》[Journal of Gansu Political Science and Law Institute]. 2020(1): 19; “关于‘人民法院基本解决执行难第三方评估指标体系’的调整说明” [“Explanation on Adjustment of ‘Third-Party Evaluation Index System for People’s Courts to Fundamentally Resolve Enforcement Challenges’”]. 江苏省法院切实解决执行难信息网 [Jiangsu Province Court Effective Solutions to Enforcement Challenges Information Network]. July 2, 2018. <http://jszx.court.gov.cn/1150/ExecuteAssess/36035.jhtml>.

¹⁰⁰ “Sunshine enforcement” refers to the courts’ transparency in issuing notices to people being subject to property investigations, and in publicly disclosing enforcement documents on their websites. “‘基本解决执行难’第三方评估指标体系调整三个核心指标适用一票否决” [“Fundamentally Resolve

It is unclear if the third-party evaluation process has suggested a built-in mechanism for double-checking that court enforcements are accurate, or for logging data concerning the instances when wrongful enforcement actions have occurred. At present it is unlikely the evaluation process would capture and seek to mitigate these missteps, given its focus on making sure above all else that enforcement is carried out. The main transparency indicator, “website observation,” assesses if official court websites disclose the legal and enforcement-related documents the third-party indicator system requires. Crucially, the third party evaluation focuses on enforcement cases where payment of a fine (rather than behavioral or other types of court orders) are required, given that these make up the bulk of enforcements. This evaluative focus could mean that there is less scrutiny directed at the fairness and standardization of cases where an action (such as an apology) is required to fulfill court obligations, potentially allowing misapplications of these types of court orders.

At the end of 2019, legal experts from around the country convened to discuss how the social credit system should be further tweaked, given new problems its implementation brought to light. Professor Wang Ruixie of Nankai University’s law school commented that what was needed was a return to “cooperative governance” (合作治理) between the public and private sectors (公私部门), and “abandonment of the ‘basket’ approach to punishment formation that “lists dishonest joint punishment and reward subjects [instead] of establishing targeted legal control programs for different types of credit tools.”¹⁰¹ Jia Yan of the Chinese Academy of Social Sciences’ Institute of Law stated that “in systematizing joint punishment for untrustworthiness, it is necessary to pay attention to the boundaries between credit governance and power.”¹⁰² Open-ended platitudes such as these were commonplace at law conferences I attended, which over time seemed to signal cautious acceptance of the new public-private partnerships that came out of the broader push for “smart courts.” I also saw hesitation about how quickly these new technological dependencies could give rise to platforms operating outside of the law at the same time that they were tasked with implementing it. Pushback to slow down or altogether drop some of the “smart enforcement” measures was absent, and the subsequent normalization of courtroom automation across China has further pushed this possibility to the sidelines.

Conclusion

Enforcement Challenges,’ Third-Party Evaluation Index System’s Adjustment of Three Core Indicators Applies One-Vote Veto”].《中国法院网》[China Court]. May 26, 2018.
<https://www.chinacourt.org/article/detail/2018/05/id/3318507.shtml>.

¹⁰¹ 王翔 [Wang Xiang]. “行政法的变迁与发展——中国法学会行政法学研究会2019 年年会述要” [“Changes and Developments in Administrative Law—Summary of 2019 Annual Meeting of the Administrative Law Research Association of China Law Society”].《人民检察》 [People’s Procuratorial Semimonthly]. (2020): 61.

¹⁰² 王翔 [Wang Xiang]. “行政法的变迁与发展——中国法学会行政法学研究会2019 年年会述要” [“Changes and Developments in Administrative Law—Summary of 2019 Annual Meeting of the Administrative Law Research Association of China Law Society”].《人民检察》 [People’s Procuratorial Semimonthly]. (2020): 61.

Consequences for the tech industry, the law, and society will emerge from Chinese courts' reliance on technology to tighten court order enforcement. Between experiments with blacklisting and redlisting in both the early aughts and the present day, technological solutionism has prevailed despite a lack of concrete evidence supporting its effectiveness. In 2004, a journalist reflecting on the Golden Credit project speculated,

"We might as well imagine that if data centralization is implemented nationwide, then the economic records of any legal entity in the country will become data that can be obtained at any time, and will follow them their whole lives. By then, will it still be difficult to build an honest society?"¹⁰³

This rhetorical question is still one that the state is attempting to answer with its perpetually out-of-reach goal of ending information asymmetry between courts and judgment defaulters. The state remains untransparent (and incurious) about the long-term social costs of the current methods of shaming and coercing blacklisters into acting on court orders. While the variety of approaches to strengthening court enforcement that this article outlines may not have started out as a mere show of force, their continuation cements them as a type of performative governance. The courts can now point to this intricate shaming apparatus in the face of criticism that they have not done enough to punish people who violate administrative law. They benefit from the narrative figure of the *laolai* and the high visibility of blacklisted people's information posted through social media and news apps. The state-firm partnerships that attempt to strengthen enforcement also reveal how tech firms' integration of government-generated data into their platforms is likely to shape future tech governance projects that depend on this direction of data flow.

Outside of China, observers have been late to question the power of state data circulating within private sector-controlled tech platforms. A common concern foreign critics raise about social credit involves the state's cooptation of private sector data, encapsulated in Hallam Stevens' characterization of Ant Financial: "Perhaps the most troubling example of this is the links between Alibaba's credit system, 'Sesame Credit' (芝麻), and the wider social credit system now being rolled out by the state. Although these systems are not by any means identical, it seems likely that data collected by online tech giants will form part of the government's own system."¹⁰⁴ As this chapter and the next two show, however, what is more foundational in social credit partnerships between the state and the firm is data moving in the *opposite* direction: from courts, local governments, and specialized government departments like aviation and education to private tech firms.

The models of state-firm cooperation in the court enforcement use case, where major tech firms like Alibaba and platforms like Toutiao and WeChat form individual, local agreements with specific courts and cities (rather than becoming the default

¹⁰³ 宋家雨 [Song Jiayu]. "'黑/红名单'"的背后 ["Behind Black/Redlists"]. 《网络世界》 [Internet World]. August 30, 2004.

¹⁰⁴ Stevens, Hallam. "Digital Infrastructure in the Chinese Register." *Made in China Journal*. July 23, 2019. <https://madeinchinajournal.com/2019/07/23/digital-infrastructure-in-the-chinese-register/>.

partner for courts in an entire city or county), serves as a reminder of restrictions on scale for these partnerships. This can act as a safeguard against monopolization or lock-in with one firm, while also potentially giving rise to minor differences in local approaches to court enforcement across China. Elsewhere scholars have referred to this as "fragmentation," a reminder that tech governance projects are neither uniform nor orchestrated in a top-down fashion. In addition, the difference between firms who create bespoke software for the courts, such as Alibaba, and those that repurpose pre-existing platform affordances to serve new functions for the state may indicate what the future of state-firm partnerships in other tech governance projects will look like.

The custom software Alibaba built to assist with court enforcement enables integration and expansion into the company's other platforms. Right now Alibaba and Ant Financial can provide the courts with a judgment defaulter's Taobao package receiving address; assess that person's ability to pay court fines using data; help the courts decide to seize the person's car or assets; freeze their Alipay and Yu'eobao accounts if a judge orders it; and finally auction the seized car or property via Alibaba's online auction platform. The vertical chain of control concentrated within this one company in the enforcement process has yet to be critically examined in Chinese legal scholarship. Diversification of which firms operate in these use cases is not a guaranteed fix for this disproportionate allocation of control, however. Concentration of a few major firms operating in this field also does not ensure that tech firms are shielded from regulatory strikes down the line. As the next chapter shows, collaborations with the state on social credit or other policy projects are only likely to garner shorter-term, limited goodwill. Toutiao, for instance, was barred from adding new users in late 2021 under an order from the Cyberspace Administration of China.¹⁰⁵

Starting from a deep dive into how tech is being integrated into court enforcement lays the groundwork for a broader examination of how the social credit system, the law, and tech firms interact to shape social change in China. Whereas critics have stressed the technological surveillance element of social credit as its most harmful, the legal frameworks that facilitate public shaming, as well as the stripping of judgment defaulters' privacy and dignity, are more meaningful sites for possible change. Draconian laws around court enforcement are less enticing a subject of debate than tech platforms, yet they must take center stage in arguments for reform. It could be useful to conduct surveys to gauge currently and formerly blacklisted people's understanding about how they become judgment defaulters, how they can appeal this designation if they feel it is incorrect, and what is required of them to remove themselves from blacklists.

The fear of omnipresent restrictions and surveillance have not been sufficient to deter people from the behaviors that get them blacklisted. As the next chapter shows, when three very different types of platforms attempt to cooperate with the state on social credit implementation, an additional set of problems arise that call for deeper consideration of pending legal and social issues.

¹⁰⁵ "ByteDance's Toutiao ordered by China to halt new registrations since Sept." Reuters. July 16, 2021. <https://www.reuters.com/technology/bytedances-toutiao-ordered-by-china-halt-new-registrations-since-sept-sources-2021-07-16/>.

Chapter 3

‘Credit Norm Producers’ Navigate Structured Uncertainty: The Strategic Compliance of Financial Technology, Ride-Hailing, and Food Delivery Companies

This chapter explains how three major Chinese tech companies managed structured uncertainty in strategically complying with State Council, NDRC, and other central government institutions’ requests to participate in social credit initiatives. The chapter first lays out Breznitz and Murphree’s conception of structured uncertainty, then explains how structured uncertainty characterized the environment these three firms navigated. It proceeds to address the unique starting point from which these firms entered into social credit-related partnerships as “credit norm producers,” a descriptor Chinese legal scholar Shen Kui uses to capture the influence these companies’ products had over both central policymaking institutions and local governments. In this chapter and the next, I trace how the “positive logic” of rewards for exemplary behavior traveled from within these companies to the NDRC’s own thinking around scoring systems in credit cities and multi-firm rewards programs such as Xinyi+.

Despite initially occupying an influential position, these three firms cautiously developed four strategies to weather structured uncertainty: 1) gauging which state institutions’ demands they could ignore; 2) looking abroad for guidance on potential future regulatory trends; 3) attempting early compliance with laws that had not yet been passed; and 4) creating dedicated channels to share aggregated, rather than individual, user data with state institutions.

The chapter concludes with an overview of how these dynamics interacted with the social credit system’s shift into a performative governance project. Firms’ participation in rewards schemes had the potential to distract from public criticisms of how these tech companies themselves eroded societal trust in fields like housing and finance. Major Chinese tech firms ultimately did not commit a great deal of funding or other resources to social credit partnerships, especially when compared to the charity work some of these companies pursued internally in a more systematic, long-term way.

Conditions of Structured Uncertainty

In their 2011 study of how China's information technology industry developed despite conflicting interests and directives from national and local governments in three regions, political scientists Dan Breznitz and Michael Murphree defined structured uncertainty as

“a part of the institutional system [...] that prevents its ‘institutionalization’ by ensuring that instead of patterns of behavior becoming routinized, a multiplicity of behaviors can be followed on a specific subject without any of the actors knowing in advance which behaviors are appropriate [...] an agreement to disagree about the goals and methods of policy, a condition leading to intrinsic unpredictability and, hence, to inherent ambiguity in implementation. This ambiguity leads to some tolerance of multiple interpretations and implementations of the same policy. Therefore, structured uncertainty is an institutional condition that cements multiplicity of action without legitimizing a specific course or form of behavior as the proper one.”¹⁰⁶

While the Chinese government attempted to institutionalize practices through social credit policy documents at national, provincial, and municipal levels, companies grew accustomed to structured uncertainty on a slew of issues that pertained to their core operations. Early media accounts of tech firms' cooperation in constructing the social credit system neglected the critical question of how these companies came to be enlisted in the social credit project in the first place, often assuming they simply pooled data with the government. This was a missed opportunity to investigate the exact mechanisms through which central government bodies like the State Council and National Development and Reform Commission convey information and demands to tech companies, and to observe how much agency the companies had in these exchanges.

Later scholarship challenged the idea that companies simply took orders from the government, instead spotlighting how vague the State Council's original social credit blueprint was as well as the ambiguous, flexible interpretations of words related to 'trust,' 'credit,' and 'integrity' that comprised the state's emerging social credit lexicon. Large Chinese tech companies grappled with understanding their place in a system with undefined boundaries.

One example of this arose in 2015 when the People's Bank of China encouraged eight companies including Ant Financial and Tencent to experiment with their own consumer credit rating systems such as Sesame Credit and Tencent Credit. Although the trial fell squarely within the financial connotations of *zhengxin* (征信, financial credit reporting), the state, the firms, and Chinese media often spoke of these products as contributing to the creation of a social credit system writ large. Tech companies likely saw this as positive press coverage at the time and did not clarify that their provisional products did not comprise a singular embodiment of social credit. This loose characterization fed into an ongoing misunderstanding of how tech companies relate to

¹⁰⁶ Breznitz, Dan and Michael Murphree. *Run of the Red Queen: Government, Innovation, Globalization, and Economic Growth in China*. New Haven: Yale University Press. (2012): 12.

the social credit system. It is still common to see Sesame Credit named as a “private social credit system” despite Ant Financial’s subsequent efforts to distance itself from this interpretation (Viktor Suter 46).

Two additional features of structured uncertainty are salient to social credit: 1) the contrast between relative freedom to enact policy reforms at a local level while central government institutions continue to issue clarifications about boundaries; and 2) the cyclical reproduction of new structured uncertainties with each round of political debate that follows a set of reforms.¹⁰⁷ This chapter shows how three companies dealt with both of these phenomena, walking through their participation in a series of Memoranda of Understanding (MoU) with the NDRC, in the NDRC-led Xinyi+ rewards project, and in multi-company “anti-credit manipulation” alliances pledging to cut down on behaviors including false user reviews.

‘Credit Norm Producers’ and the Positive Logic of Rewards

All research on the technological implementation of the social credit system emphasizes the power that tech firms have in Chinese citizens’ lives, though little of this work has questioned how the companies influenced the government. In this chapter, I focus on three major Chinese tech firms that worked their way through structured uncertainty to develop strategies for selective compliance with social credit schemes. I argue that tech companies’ relative success in shaping user behavior through offering rewards and other perks was a feature the NDRC itself sought to internalize and replicate. Alibaba spin-off Ant Financial is China’s biggest financial technology (fintech) company and runs the Sesame Credit consumer scoring product, Didi Chuxing is China’s dominant ride-hailing app, and Meituan is one of the country’s two most powerful food delivery platforms. Users’ dependence on these three firms translated to the state’s dependence on the company, in part because the firms can dispense benefits the state would be unable to subsidize or offer on its own.

Ant Financial

E-commerce behemoth Alibaba’s spin-off financial technology (fintech) firm Ant Financial has garnered international attention for its Alipay mobile payment app, which has 900 million users in China. Alibaba first developed Alipay in 2004 to process payments for online purchases through its TMall and Taobao platforms.¹⁰⁸ Alipay quickly became a necessary, infrastructural part of life in many parts of urban—and to a lesser extent, rural—China. Chinese Internet users increasingly make purchases directly within Alipay and other mobile payment apps (rather than visiting individual stores’

¹⁰⁷ Breznitz, Dan and Michael Murphree. *Run of the Red Queen: Government, Innovation, Globalization, and Economic Growth in China*. New Haven: Yale University Press. (2012): 21, 37.

¹⁰⁸ Whereas TMall can be compared to Amazon, Taobao is an Amazon Marketplace-like shopping platform that allows both established brands and smaller merchants to sell directly to consumers.

websites in a separate web browser).¹⁰⁹ In part to make assessments about individual consumers as well as sellers on its platform, Ant Financial established a consumer credit scoring system, Sesame Credit (芝麻信用).

My contact with the company came in the wake of media scrutiny of these variously praised and criticized third-party uses of Sesame Credit. In December 2018, a well-known US scholar of Chinese law and I were invited to Ant Financial's headquarters in Hangzhou to interview the company. At the time, Ant had spent at least three years dealing with foreign media conflating its credit product with the state social credit system, a misconception of Sesame Credit as a state-guided effort to feed private sector data on consumers to the government in order to issue scores judging people's morality. As I address in the Introduction chapter, this was both far from the truth and may have even been averted if the company had been more proactive at distancing themselves from the state's project.

My colleague and I interviewed a team of four public relations employees (and one lawyer we had met at prior workshops, who was more of a chaperone than a respondent in the interview). The contradictions that arose in the oblique answers to our questions may themselves reflect the company's tightrope walk between appearing amenable to state demands while carving out an image of independence as it eyed a prospective IPO and expansion outside of China.

Most of the interview responses came from a male PR representative who took on a leading role alongside his co-workers. He presented a slightly more detailed version of the much-repeated Sesame Credit origin story in which the company needed a way to resolve the information asymmetries that impeded trust-building between Taobao sellers and buyers. Despite comparisons to FICO, he insisted, Sesame Credit is neither an exact FICO replica nor quite a traditional form of *zhēngxìn* (征信, financial credit report). Rather than reflect probability of defaulting on loan repayment like most credit scores, Sesame Credit scores represent both individuals' and small and medium enterprises' (SMEs) "probability of compliance with agreements" (履约概率).

"Positive logic" travels from the firm to the state

Within Alipay, users can consent to having their data used to generate a Sesame Credit score that is viewable in the Alipay app. A data visualization breaks down the five scoring criteria: personal characteristics, ability to fulfill contracts, credit history, personal connections, and behavioral tendencies.¹¹⁰ To receive a Sesame Credit score, an individual must already have an Alipay account that contains "binding data" such as real-name registration, state ID, and phone number. Sesame Credit then outputs a score between 350 and 950 points that is updated monthly. Sesame Credit scores were previously used to make lending decisions in Ant Financial's micro-lending product

¹⁰⁹ Shen, Hong, C. Faklaris, H. Jin, L. Dabbish, J. Hong. "I Can't Even Buy Apples If I Don't Use Mobile Pay?": When Mobile Payments Become Infrastructural in China." *Proceedings of the ACM on Human-Computer Interaction* 4. CSCW2. (2020).

¹¹⁰ 纪森森、等 著 [Ji Sensen et al]. 《信用经济：下一个十年红利风口》 [Credit Economy: The Next Decade of Dividends]. 电子工业出版社 [Publishing House of Electronics Industry]. (2019): 54.

Huabei (花呗), as well as to determine discounts and deposit waivers for third-party services that partner with Sesame Credit. While the company often markets itself as bringing China's 'unbanked' populations into the formal financial system, its appeal extends to users across both sides of this divide.

The People's Bank of China issues a credit score similar to the United States' FICO scores. Yet many low-income Chinese citizens feel that bank loans and related formal financial services are not intended for their use—both due to the burdens of providing collateral and documentation, as well as bank clerks' condescension during the loan application process.¹¹¹ In their interviews of Chinese migrant workers employed at a factory in Shenzhen, anthropologists Tom McDonald and Li Dan discern how class differences may shape use and understanding of Ant Financial's Sesame Credit, Huabei, and Ant Credit Pay.¹¹² They found that the "depersonalized" nature of Ant Financial's fintech products appeals to working-class users, and that the "binding data" requirement at registration lowers barriers to entry for otherwise marginalized users. The characterization of Alipay's fintech product suite as more welcoming than Chinese banks also carries over to middle- and upper-class users.¹¹³ From its inception, Sesame Credit's public perception helped ingrain its use in everyday life—a quality that later made the product a model to local governments seeking to implement the online platforms of their parallel social credit pilot tests.

At a conference I attended at a university in Beijing in fall 2018, a data product compliance representative from Ant Financial made brief remarks about algorithms, automated decision-making, and how he and others at the company were thinking about both of these areas in relation to Ant's consumer credit scoring service. As he put it, "algorithmic scoring is mainly about added value. After you create a score, you should add value to users in multiple scenarios, rather than using scores to restrict behaviors or applications for some services. For example, with products that require a deposit, based on [whether or not you have a] relatively high score, you can rent a bicycle or car without paying a deposit. But you should not go the other way, [where] because your rating [of them] is very low, [the user] can't enjoy your service. This is a positive logic." A little over half a year later, in 2019, the NDRC issued a statement at a

¹¹¹ McDonald, Tom and Li Dan. "Alipay's 'Ant Credit Pay' meets China's factory workers: the depersonalisation and re-personalisation of online lending." *Journal of Cultural Economy* 14, no. 1. (2021): 93.

¹¹² Ant Credit Pay extends lines of credit to users based on their consumption behavior and how they are evaluated within Sesame Credit. McDonald and Dan's interviewees who use these products described how low-income Chinese workers perceive banks and bank-issued credit cards as having not been designed with them in mind. Difficulties in providing documentation of collateral, long-term employment, and other traditional markers of creditworthiness to traditional banks contribute to this image, as does bank employees' mistreatment of customers they perceive to be poor. McDonald, Tom and Li Dan. "Alipay's 'Ant Credit Pay' meets China's factory workers: the depersonalisation and re-personalisation of online lending." *Journal of Cultural Economy* 14, no. 1. (2021): 91.

¹¹³ An individual who HCI scholar Hong Shen, along with a team of researchers, interviewed described Alipay as more "friendly than most banks in China," in particular praising how its money market fund product Yu'e Bao produces high returns on investments and recommends financial services to users. Shen, Hong, C. Faklaris, H. Jin, L. Dabbish, J. Hong. "I Can't Even Buy Apples If I Don't Use Mobile Pay?": When Mobile Payments Become Infrastructural in China." *Proceedings of the ACM on Human-Computer Interaction* 4. CSCW2. (2020): 14.

press conference noting that city-level scoring systems could only be used to incentivize trustworthy behavior and not to punish untrustworthy actions, a responsibility that still fell to the courts and other state institutions.¹¹⁴ This underscores how “positive logic” was used to both influence individual behavior while simultaneously serving as a check on local governments’ punitive power.

Ant Financial spread the model of this “positive logic” in a variety of institutions that had already normalized payment via Alipay. In an attempt to approximate credit-based payments in Western economies, Ant Financial partnered with hospitals to enable high-scoring Sesame Credit users to pay their hospital bills at a later date.¹¹⁵ The “pay later” option also made its way to clothing and electronics retailers who adopted a “try first, buy later” (先试后买) model for high-scoring Sesame Credit users. In their survey of which goods and services people used Alipay and WeChat pay for most frequently, Hong Shen et al. found that respondents were more likely to use Alipay for utilities (67%), bike sharing (43%), lodging (29%), and charitable donations (21%) than they were to use rival Tencent’s WeChat Pay.¹¹⁶ Shared bike rentals and lodging (hotels, some apartment rentals) are two of the rental types for which Alipay offers deposit waivers for users with high Sesame Credit scores, while Ant Financial representatives have previously cited utility bill and charitable donation payments as data points that factor into Sesame Credit’s scoring model. As the section on the NDRC’s Xinyi+ program later in this chapter shows, these are all categories of rewards that a slew of Chinese tech companies including Ant Financial now offer across China.

It is a sign of how much more permissive and open to experimentation this subsector of tech was in China pre-2021 that Ant Financial was allowed to continue to partner with Xinyi+ and other state-firm partnerships on social credit despite early missteps with “off-label” applications of Sesame Credit scores.¹¹⁷ Some of the splashy third-party partnerships that attracted negative foreign press early in Sesame Credit’s history included its use in dating and marriage matchmaking apps. Dating website Baihe offered an option to pull a user’s Sesame Credit score for display in their dating profile. Reports at the time alleged that women perceived high-scoring men as more financially stable even though the company’s own description of what the score indexes might suggest otherwise. At around the same time, a Beijing airport held a trial of fast-tracking high Sesame Credit scorers through airport security, not unlike TSA Pre-Check screenings in the United States. Given the potential loopholes in public security this opened up, this feature was short-lived. Sesame Credit scores even held authority outside of China’s borders when the governments of Singapore, Japan,

¹¹⁴ Zhang, Chenchun. “Governing (through) trustworthiness: technologies of power and subjectification in China’s social credit system.” *Critical Asian Studies* 52, vol. 4. (2020): 581.

¹¹⁵ At many Chinese hospitals, one registers and receives a ticketed number (挂号) that becomes a thread tying together the entire visit, from taking diagnostic tests with one set of specialists to the actual meeting with physicians, filling prescriptions at the in-house pharmacy, and concluding by paying for the service and medicines in full.

¹¹⁶ Shen, Hong, C. Faklaris, H. Jin, L. Dabbish, J. Hong. “I Can’t Even Buy Apples If I Don’t Use Mobile Pay?”: When Mobile Payments Become Infrastructural in China.” *Proceedings of the ACM on Human-Computer Interaction* 4. CSCW2. (2020): 10.

¹¹⁷ Rona-Tas, Akos. “The Off-Label Use of Consumer Credit Ratings.” *Historical Social Research* 42. (2017).

Canada, and a few other states worked out a fast-tracked visa application scheme with Ant Financial. Chinese citizens applying for tourist visas to partnering countries would first be evaluated to see if their Sesame Credit scores were high enough to participate in the visa expediting process, and if they cleared this criterion, Ant Financial would create a financial statement using the linked bank account data visible to the company's Alipay app.¹¹⁸

In our interview, Ant Financial's PR representatives brought these up as examples of ventures the company ended, though efforts to disentangle these technologies from their socially repurposed uses largely failed. If anything, some of these uses of Sesame Credit were what initially attracted government interest in seeking Ant's expertise on social credit projects.

Whereas the "off-label" uses are now defunct, the pay later schemes at hospitals and shops may have brought China closer to operating like markets with more widespread credit card usage, and are still functioning.¹¹⁹ Perhaps most surprising was Ant Financial's ability to have initially provided these features at all in China, a marker of a time before tech firms lost the public's trust and when regulators were more open to allowing them to experiment. The state's initial tolerance may also have to do with how many of these reward types were commensurate with the growth of the Chinese middle class, and with the goal of moving China into being a service-oriented rather than manufacturing-dependent economy. This consideration resurfaces in Chapter 3, where I show how even when Ant Financial may not have been in direct contact with city-level governments, the latter nevertheless referenced the company as a model for attracting residents to local pilot test apps and websites promising small rewards and subsidies for certain 'trustworthy' behaviors.

Ant Financial's strategic response to structured uncertainty

From the early days of the social credit system, tech firms lacked a clear understanding of where this system's boundaries sat and where they fit within them. This is reflected in the arc of Ant Financial's initial enthusiasm for partnerships with the state on social credit initiatives, followed by the firm later trying to distance itself from foreign narratives of social credit. Partially as a result of vague language around this state-firm relationship, several features of Sesame Credit have led foreign observers to misconstrue the product as a national "social credit score." Ant Financial has tried to walk back from this narrative in international media while nonetheless continuing to

¹¹⁸ This feature stirred controversy for making it seem as though Sesame Credit scores would determine who received visas. While Ant's actual involvement resembled that of a bank drawing up an individual's financial statements in support of a visa application, it nonetheless raised alarm about the company's power in determining who had access to this perk—namely wealthier, cosmopolitan Chinese citizens. Vanderklippe, Nathan. "Ottawa opens door to China's Sesame Credit for visa seekers' credit scores." *Globe and Mail*. December 2, 2018, <https://www.theglobeandmail.com/business/article-ottawa-opens-door-to-chinas-sesame-credit-for-visa-seekers-credit/>.

¹¹⁹ Rona-Tas, Akos. "The Off-Label Use of Consumer Credit Ratings." *Historical Social Research* 42. (2017).

participate in a range of state initiatives established under the auspices of bolstering the social credit system, such as the partnerships with courts addressed in Chapter 1. Before describing how Ant Financial responded to contrasting and unclear directions from the state, however, it is critical to address the company's own vagueness around some of the most alarming claims its own representatives had made in 2014-16, many of which still live on as myths about social credit.

A few weeks prior to my interview at Ant Financial, a mix of the company's data scientists and external figures who advised the firm published a book, *Credit Economy: The Next Decade of Dividends* (《信用经济：下一个十年红利风口》). My plan to use the book as a "probe" in the interview—to point to its statements about Sesame Credit's scoring models and explicit links to the Supreme People's Court's blacklist databases in my interview questions—quickly fell apart. A male PR representative looked over my copy of the book and said none of them had read it but that it was "kind of misleading." Why members of the public relations team of this major Chinese company had not read a book about their company before its release, even though it was co-authored by both members of the company and external specialists, was not explained in the interview.

One now-infamous example I drew out of the book concerns whether people who play video games (an assumption based on Alipay consumption of games and in-game purchases) would receive lower Sesame Credit scores. A section of the *Credit Economy* book describing a type of algorithm Ant Financial uses for generating Sesame Credit scores includes a screenshot of a table comparing what are ostensibly three hypothetical users' Alipay purchases. The first column mostly contains purchases related to video gaming, such as in-game 'gold,' the second is predominantly purchases of baking supplies, and the third mainly contains purchases related to children's textbooks. The book claims that "In further analyzing the correlation between probability of breaking a contract and the subject (shopping preferences), taking the example of gaming as a shopping preference, the higher the customer's tendency [to buy items within this category], the greater the risk. Users with a tendency of up to 5% have a risk of violating contracts that is about 5 times higher than the overall average."¹²⁰

Although the book came out in 2018, this section surprisingly echoes a narrative about Sesame Credit that Ant Financial spent years trying to dispute. Three years prior, a representative from the company was quoted in a media interview as saying that purchases users made in Alipay were among the factors most determinative of their Sesame Credit scores, and the example he gave was one in which people who spend money on video games would have lower scores, while people who purchased diapers (presumed to be parents and therefore "responsible") would have higher scores. While Sesame Credit scores do not solely depend on Alipay purchases, and the company later clarified that individual purchases are not weighted with specific values used in a linear calculation of scores, this misstated claim became a central feature of myth-making about the social credit system as having decided gamers were more likely to fail to fulfill agreements.

Responding to my question about whether this was true while sharing the excerpt

¹²⁰ 纪森森、等著 [Ji Sensen et al]. 《信用经济：下一个十年红利风口》 [Credit Economy: The Next Decade of Dividends]. 电子工业出版社 [Publishing House of Electronics Industry]. (2019): 47-48.

in the book with the PR team members, the male PR representative responded that teams change often at Ant Financial and that the people who wrote this segment of the book perhaps misrepresented the product. One of the female PR representatives chimed in that although she was not an algorithm expert, she thought the book was misleading and Sesame Credit does not focus on the type of purchases people make on Taobao or other Alibaba e-commerce platforms. Rather, she continued, Sesame Credit assesses the “economic circumstances” (经济状况) and “compliance history” (履约历史) of individuals, such as if people returning items on Taobao delay mailing items back to sellers until after they have received their refunds. This part of the interview did not satisfactorily address if some of the accounts about Sesame Credit that have sparked global fears about the company’s user evaluations are warranted. It came at a time when Ant was pivoting to separating itself from foreign perceptions of the company as being in the government’s back pocket, and as being a main executor of the social credit system. While the firm was still wavering about how to balance appearing both friendly to state interests domestically and a free market agent to skeptics abroad, they did conduct research on other countries’ credit systems in anticipation of global trends potentially affecting the Chinese market.

Looking abroad to predict trends at home

In much of the foreign discourse about the social credit system, commentators rarely question if and how Chinese tech companies see themselves within a global context, and how they look to regulatory trends abroad as preemptive cues for how to adjust their own products domestically. Late 1990s Chinese discussions of creating a social credit system involved studies of other emerging economies’ credit systems.¹²¹ Throughout my fieldwork, I repeatedly saw scholars, tech industry employees, and government officials citing the United States, Germany, and other developed credit systems as examples to draw from while acknowledging unique economic and social circumstances in China that made it difficult to directly emulate FICO, Schufa, or other foreign counterparts. A data product regulatory compliance (数据产品合规) specialist from Ant Financial spoke on this subject at a social credit conference in Beijing in the fall of 2018. He noted that in 2015, people within the company started to pay attention to how foreign credit companies and sectors that were increasingly reliant on automated decision-making addressed regulatory and user concerns, citing the European Union’s General Data Protection Regulation, reports coming out of the Canadian government and the White House on making algorithmic systems accountable to the public, and New York City’s Algorithmic Accountability Act.

According to the Ant employee, the company consulted European law firms in 2017 about what kinds of lawsuits were opened against credit-rating companies there, and found that users from over a dozen European countries filed suits requesting that credit rating agencies disclose how they calculate their scores. Ant Financial sought to

¹²¹ Knight, Adam. “Technologies of Risk and Discipline in China’s Social Credit System.” Chap. 9 In *Law and the Party in China: Ideology and Organisation*, edited by Rogier J. E. H. Creemers and Susan Trevaskes, p. 238. Cambridge, Cambridgeshire: Cambridge University Press, 2020.

understand how overseas developments in machine learning-dependent consumer credit might take root in China. The Ant representative also commented that there was comparatively little research coming out of China on these issues from 2015-2017. As of 2018, he argued, both emerging discourse around information security regulations and a government AI standardization white paper started to draw domestic attention to algorithms. Despite Ant's and possibly other firms' interest in how trends outside of China might have entered the country, however, the social credit project remained uniquely suited to China's circumstances in part because of the dedication to its highly variable localized implementations.

In my Ant Financial interview, I attempted to understand how the company partnered not only with the NDRC but also with local governments. As I cited Chinese news and magazine articles claiming Ant co-developed the city of Suzhou's local social credit pilot, Ant's PR representatives insisted that at most, the company had presented basic information about Sesame Credit to a few local government officials. This fit with the then-emerging practice where big tech companies either flaunted or downplayed the degree to which they cooperated with the state's social credit initiatives. They distanced themselves from these projects as international press around social credit became inseparable from comparisons to Orwellian dystopia, yet embraced them in domestic media at the same time that the companies were racking up fines and reprimands from regulators for violating what were then still-coalescing norms around digital privacy. While balancing appearances of both enthusiasm for the social credit system at home and distance from it abroad, Ant Financial also pursued small forms of resistance against social credit developments that the firm saw as a threat to its competitiveness.

The failed compromise of Baihang

Two examples—of continued operations despite official reproach, and outright refusal to share data with a quasi-state institution—reveal that companies had leeway to avoid social credit-related projects. In the first case, after the two-year pilot testing phase (2015-2017) in which the People's Bank of China gave eight Chinese tech firms, insurers, and banks the freedom to experiment with their own credit scoring and reporting products, the state refused to license these institutions.¹²² Some of the products originally green-lighted for the pilot test faded out of the public eye, such as

¹²² According to Wan Cunzhi, head of the PBOC's credit reporting bureau, the main reasons these credit scoring initiatives were not issued licenses were: 1) inclusion of data irrelevant to the purpose of credit scoring in the companies' models (e.g., social media contacts and networks), 2) invasions of users' privacy as a result of collecting these data, and 3) a conflict of interest wherein some of the firms that served as each other's competitors (e.g., Alibaba spin-off Ant Financial and Tencent) would not centrally share their proprietary user data in a way that might give rivals access to the data—even in service of the broader objective of preventing peer-to-peer lending fraud by comparing users' loan activity across fintech products). Hornby, Lucy. "China changes tack on 'social credit' scheme plan." *Financial Times*. July 4, 2017, <https://www.ft.com/content/f772a9ce-60c4-11e7-91a7-502f7ee26895>; Koetse, Manya. "Baihang and the Eight Personal Credit Programmes: A Credit Leap Forward." *What's on Weibo*. June 10, 2018. <https://www.whatsonweibo.com/baihang-and-the-eight-personal-credit-programmes-a-credit-leap-forward/>.

Tencent's credit assessment embedded in WeChat pay, Tencent Credit (腾讯征信). Sesame Credit, however, had already become such a fixture in millions of Alipay users' lives that it could not as easily disappear. Over time, Ant doubled down on reminders that its scores reflected consumers' "probability of fulfilling agreements" as a strategy for dissociating themselves from claims of judging financial or moral creditworthiness.

One month after The PBOC's announced the end of its support for the credit scoring pilot tests, the central bank declared it would instead require these same companies share credit data with the quasi-state-run Baihang Credit Union (白行信用联合). Founded in March 2018, the Baihang Credit union is a joint venture in which the eight original institutions the PBOC allowed to experiment with credit scoring each hold an 8% share in the company, while the quasi-private National Internet Finance Association (NIFA) holds the remaining 36%. As of April 2018, over 700 smaller online microlending firms had signed up to share their platform data with Baihang, thus enabling them to see users' borrowing histories across different lenders.

I saw references to Baihang in news media and at conferences, yet few major developments surfaced until after I left China. Baihang Credit representatives I met at a conference in June 2019 who were at first open to being interviewed later were unresponsive to my and a colleague's follow-up inquiries to meet them at their headquarters in Shenzhen. When I pressed Ant Financial about the then-nascent efforts at setting up the Baihang Credit Union, their male PR representative responded that they did not know how NIFA would execute this project, and that the view of companies including Ant Financial was "I won't give my data to you because business is business." This sentiment—of protecting companies' competitive advantage through the unique user data they hold, even if that meant defying a partially state-run institution's mandate—presaged Baihang's stumbling block.

The responses about Baihang recalled comments a later interviewee (from Meituan, see below) made about state institutions that lack the power to make rules, and the measured way tech companies calculate and test whether they can get away with noncompliance when a demand comes from an institution they deem to be insufficiently powerful. In September 2019, the *Financial Times* revealed that Tencent and Ant Financial refused to share the data they held on users' personally identifying information, borrowing history, and loan repayment with Baihang. The companies did not offer public comment on their choices, although a former Tencent employee speculated that they might have been more likely to fork over data if the request had come from the PBOC itself rather than this fairly new, non-compulsory, quasi-private company.¹²³

¹²³ Yang, Yuan and Nian Liu. "Alibaba and Tencent refuse to hand loans data to Beijing." *Financial Times*. September 19, 2019. <https://www.ft.com/content/93451b98-da12-11e9-8f9b-77216ebe1f17>. Immediately after reading this article, I opened WeChat on my desktop to see if members of a WeChat group of Chinese experts on social credit (discussed in the following chapter) that a former interviewee invited me to were discussing it. Someone had already posted a link to a WeChat article translating and commenting on excerpts from the *Financial Times* piece, with a headline editorializing on how "awkward" (尴尬) it was for Baihang, and by extension the PBOC, that this information about powerful tech firms refusing to cooperate had made it into foreign media. In the time it took me to step away for a glass of water, this article was scrubbed from WeChat. It is unclear whether the author of the article

The Baihang saga constituted a heightened second attempt at government intervention in the consumer credit space following the PBOC's license denial episode the prior year. Tencent and Ant Financial made clear the prioritization of each maintaining a competitive edge over its main rival, instead of acquiescing to a years-in-the-making, market-wide, nominal effort to crack down on fraudulent and otherwise risky lending through reduction of information asymmetries. This refusal to "pool" data is instructive in demonstrating where there is room for Chinese tech firms to serve their own interests without suffering (immediate) consequences. Even if the firms capitulate in the future, the Baihang experience nonetheless shows cracks in the belief that Chinese tech firms are quick to act on state demands even when those demands contradict their own ambitions.

Ant Financial's Reckoning

As my interviews with and observations of the major tech companies that collaborate with the government on applying the social credit system reveal, companies' own interests—profit, competitive advantage, and compliance with laws restricting unwarranted data sharing—all motivated decisions to do the exact opposite of what popular images of the social credit system as an all-encompassing data vacuum entail. When I asked Ant Financial representatives about the company's publicly documented commitment to participating in data sharing with the State Credit Information Center¹²⁴, for instance, the male PR representative characterized this as "a more academic cooperation to understand the macro state of the sharing economy, for instance, how many people use deposit waivers," and that the company held user surveys (用户调查) for similar purposes. While this might play into the strategy I described of isolating the company from foreign media narratives about social credit, it may also reflect the company's own drawing justifications for narrow data-sharing. Instead of data pooling, Ant Financial and Sesame Credit in particular have faced a different set of compromises with the state.

Sesame Credit paused scoring in spring 2020 as the Covid-19 pandemic overtook China. In January 2021, Baihang's three-year operating license expired. In June 2021 there was talk of Ant Group negotiating with state-owned firms to set up a new credit scoring company that it would seek a license for under the new rules for credit scoring businesses, and media reports noted that the Sesame Credit team had significantly

deleted it as a preemptive way to avoid censorship, or if the platform removed the article in such an act of censorship. I did not see further mention of this development in the group, which to me drove home how rare public documentation of tech firms openly refusing to go along with state agendas are.

¹²⁴ The data infrastructure of the social credit system is centralized through the State Information Center (国家信息中心). The State Information Center runs the "Credit China" (信用中国) online platform, which the Legal Daily described as serving three functions: 1) sharing and exchanging credit information across government bureaus; 2) enabling government bureaus to query credit reports (信用报告) using unified social credit codes of individuals, businesses, and other entities; and 3) supporting the joint reward and punishment mechanisms through linking data with other government bureaus. The "National Credit Information Sharing Platform" (全国信用信息共享平台), which the NDRC and the State Information Center run, has been called the "general hub" of public credit information.

shrunk. Links between Alipay, Huabei (credit-card like feature), and Jiabei (loans) have since been severed. The most recent update suggests that the new credit scoring company Ant sets up will draw data from Sesame Credit without including it in the new business, and Ant will exit Baihang as a shareholder.

Didi Chuxing

Ride-hailing company Didi Chuxing (滴滴出行) has over 370 million annual active users and 13 million drivers in China, making it both the country's and the world's biggest ride-hailing platform.¹²⁵ Scholars Julie Yujie Chen and Jack Linchuan Qiu describe Didi's ride-hailing services as a "digital utility," which they define as "public services and values...[that have] transformed digital conditions embedded in the access to public or private services, without which the utilization of such services would be categorically different."¹²⁶ The company has undergone an extended tug-of-war with various Chinese regulators and government agencies for issues spanning illegal employment of drivers, passenger safety, and data security.

Didi's partnerships with the state on social credit initiatives must be considered alongside the firm's other relations with local and national government actors. Chen and Qiu argue that Didi has long profited from "regulatory arbitrage": in China's previously loose regulatory environment around data sharing, the company simultaneously reshaped urban infrastructure, extracted data that positioned it to best understand new traffic patterns within Chinese cities, and held out access to this data and its insights as a point of negotiating its relations with city governments.¹²⁷ For years, Didi has hired the platform's equivalent of "black cab" drivers, operated predominantly in Chinese cities where it was unlicensed, and illegally hired migrant workers (violating restrictions on the 'floating population' of people working in cities where they are not authorized to under China's hukou, or internal passport system.) While Didi cemented an indispensable position in its relationship to local governments, the company faced a slow buildup of national government indignation for some of the worst harms committed via its platform.

Between 2016-2018, three incidents of male drivers murdering female passengers were widely covered in Chinese media, with more than 50 reports of passenger sexual harassment and assault occurring between 2014-2018.¹²⁸ The company responded

¹²⁵ Zhu, Julie. "Didi in talks with state-backed Westone to hand over data control-sources." Reuters. August 6, 2021. <https://www.reuters.com/world/china/exclusive-didi-talks-with-westone-hand-over-data-control-after-ipo-dustup-2021-08-06/>.

¹²⁶ Chen, Julie and Jack Qiu. "Digital utility: Datafication, regulation, labor, and DiDi's platformization of urban transport in China." *Chinese Journal of Communication* 12, no. 3. (2019): 277.

¹²⁷ Chen, Julie and Jack Qiu. "Digital utility: Datafication, regulation, labor, and DiDi's platformization of urban transport in China." *Chinese Journal of Communication* 12, no. 3. (2019): 281.

¹²⁸ Hu, Bailey. "Former Didi driver sentenced to death for murdering passenger in Shenzhen." TechNode. December 14, 2018. <https://technode.com/2018/12/14/didi-driver-robbery-murder/>; Huang, Echo. "Another woman was murdered while using Didi's car-pooling service." Quartz. August 27, 2018. <https://qz.com/1370345/another-didi-hitch-ride-hailing-driver-murdered-a-female-passenger-in-china/>.

minimally—removing a back-end passenger rating feature for drivers described below, twice suspending its “Didi Hitch” service that matches drivers and passengers traveling the same routes, and attempting to tighten background check mechanisms. Didi found itself the target of a government request to share driver and passenger data in real time, allegedly to prevent such incidents from recurring. They pushed back, instead rolling out trial measures such as passenger-initiated audio and video recordings of rides.¹²⁹

This internally-determined change to the platform fits a broader pattern wherein major Chinese tech firms make a concession that protects their control over their data while attempting to appease regulators. Didi’s involvement in social credit projects point to how the state enlisted companies both to shape user behavior towards certain models of ‘trustworthiness,’ and to proffer their own data to the State Credit Information Center, Credit China, and other social credit data infrastructure as a way to monitor the companies themselves. While maneuvering its way through these crises, Didi also developed strategies for protecting itself from further reprimands.

Aggregated data sharing as state-firm compromise

As described in Table 2 above, Didi is one of eight companies to have signed onto the NDRC’s “Anti-Credit Manipulation Information Sharing Agreement.” The company also signed a credit information sharing agreement with the NDRC, which it announced in combination with the unveiling of its participation in the Xinyi+ rewards project. At the spring 2018 launch event for the Xinyi+ alliance, Credit China quoted Didi’s Vice Chairman Cai Nan describing the project as one in which “government departments’ role is to lead development and [act as a] safeguard... As for [this] safeguarding, Didi has accumulated a massive amount of transportation data. These data must be linked up with the government and the national information center. Data exchanges should not have the issue of being disjointed, but there is a problem of value changing direction, including missing data and [data] loss.”¹³⁰

As part of the “Credit Information Sharing Cooperation Agreement” Didi signed with the NDRC and stemming from its participation in Xinyi Transport, Didi pledged to “integrate the data on total amount of bad debts by region, and total amount of customers with bad debts by region, produced on the platform into the national urban credit status monitoring system” into this state-managed credit information sharing platform.¹³¹ Sharing aggregated data is a strategic choice that fits with Didi’s precedent for sharing traffic data with local governments, a light lift for the company that does not

Liang Chenyu. “Didi Overhauls Safety Measures Following Passenger Murder.” Sixth Tone. May 16, 2018. <http://www.sixthtone.com/news/1002285/didi-overhauls-safety-measures-following-passenger-murder>

¹²⁹ Zhao, Runhua. “Didi tests in-car video and audio recording for passengers’ ride safety.” TechNode. July 26, 2018. <https://technode.com/2018/07/26/didi-tests-in-car-video-and-audio-recording-for-passengers-ride-safety/>.

¹³⁰ “多方协同 共推信用城市建设” [“Multiple Parties Collaborate to Build a Credit City”]. 《中国信用》[Credit China]. 2018(6): 37-38.

¹³¹ “‘信易行’项目启动” [“Xinyi Transportation’ Project Launched”]. 《中关村年鉴》 [Zhongguancun Yearbook]. (2019): 231.

expose it to the risk of competitors accessing more valuable data on Didi users.

At the same launch event, Didi founder and CEO Cheng Wei said the company would “earnestly fulfill its social responsibilities and strongly work on pilot testing to help build the social credit system.”¹³² Much like with other major Chinese tech companies who became part of these efforts, Didi’s senior leadership used these media opportunities to associate the company with social credit and evolving ideas of a “social organization”—Chinese companies cultivating a civic responsibility through large charitable donations and state partnerships. The one opportunity I had to hear from a Didi employee was notable for its omissions of the above contributions to social credit initiatives. Instead, he offered insights into the company’s thinking around its legal obligations and its internal assessments of drivers’ and passengers’ trustworthiness—concerns that remain pressing today despite recent legislation.

Preemptive legal compliance in the face of structured uncertainty

In the fall of 2018, I was a presenter at a small conference on the social credit system hosted at a Beijing university where a representative from Didi Chuxing spoke to academic, government, tech industry, and think tank representatives. Although he claimed not to work directly on credit-related topics within the company, his short talk contextualized the company’s concerns about managing user and driver safety, including background and reputation vetting of drivers. He spoke of the tensions in anticipating forthcoming Chinese legislation that would affect systems the company had in place to address these issues, previewing new practices they considered in order to adapt.

The representative spoke about how, as a company serving a two-sided market in which drivers and passengers are both users, Didi sought to gauge the quality of drivers’ service as well as to “balance the relationship between these two users” by developing its own rating systems (评价体系) for both. He went on to describe how the platform calculates a “service score” (服务分) using its access to drivers’ GPS data enabled monitoring of when they braked suddenly and drove through red lights, among other indicators like rejecting ride requests and accepting orders in a timely manner. As points within this rating system rose, he noted, the number of orders dispatched and drivers’ income may have also seen a rise. Conversely, he pointed out that if scores fell below a certain threshold drivers received fewer orders and could ultimately be booted from the platform. In these respects, Didi is not unlike Uber and other ride-hailing firms outside of China.¹³³

Didi’s scoring of passengers derives from drivers’ own ratings of passengers’ behavior, combined with the platform’s evaluations of if passengers were far from their pickup point by the time the drivers arrived, and if passengers frequently canceled

¹³² “国家发改委与滴滴签约就乘客‘黑红名单’进行信息共享” [“National Development and Reform Commission and Didi Sign Agreement to Share Information on Rider ‘Blacklists and Redlists’”]. 《浙江新闻》 [Zhejiang News]. March 7, 2018.

¹³³ Rosenblat, Alex. *Uberland: How Algorithms Are Rewriting the Rules of Work*. Berkeley: University of California Press. (2019.)

orders without a reason. The Didi employee drew a parallel between court-blacklisted judgment defaulters who are disallowed from riding Chinese high-speed rail and both types of Didi users facing the “possibility of being entered onto a blacklist” within the company’s evaluation system, i.e., drivers whose low service ratings barred them from receiving ride-hailing orders, and passengers whose ratings fell low enough to negatively influence their opportunities for securing future rides.

This comparison elided many of the differences between the goals of Chinese court blacklists (raising compliance with administrative law) and Didi’s own blacklist-like constraints. It underscored how the company preemptively took on a governance function that might have staved off state interventions to monitor Didi users. According to the Didi representative, the company even briefly tested out a micro-lending product of its own for drivers in which these scores were one input into determining whether or not they qualified for loans—a trend many non-financial Chinese tech firms briefly attempted.¹³⁴ The end of this short-lived trial may have spared Didi from the heightened regulatory scrutiny that has brought down upstart online micro-lenders and incumbent fintech firms alike. In advance of passage of China’s E-Commerce Law’s, and as discussions evolve over whether the country should have a social credit law, Didi’s exploration of internal scoring systems may have prompted timely discussions within the company about how to make such evaluations as fair, objective, and non-discriminatory as possible.

At the time of the conference, China’s E-Commerce Law was two months away from entering into effect. Looking ahead to the consequences it would have for his company, the Didi representative cited Article 39 of the August 2018 draft version of the law, which stipulates

“E-commerce platform operators shall establish and complete credit rating systems, announcing rules for credit ratings, to give consumers a channel through which to rate the goods sold and services provided on the platform.”¹³⁵

His interpretation drew attention to the law’s language around how platform companies “should” create internal credit rating systems, which he read as ensuring that “now this kind of a credit rating system is a legally defined action, a ‘should,’ (应当) not a ‘may (可以).” The attention to diction and effort to distill the law’s guidance for how to transition the company’s experiments in evaluative scoring into a long-term practice offered a glimpse of how Chinese tech companies handle structured uncertainty.

Additional stipulations within the impending E-Commerce Law he brought up included requirements that platforms’ own credit rating regulations (信用评价规则) be publicly accessible, and that platforms cannot arbitrarily delete users’ ratings of their services. Companies were legally required to ensure complete and accurate records of user ratings. These additions appear to supplement some of the terms of the “anti-credit

¹³⁴ Yang, Zeyi. “Chinese microlending is getting weird and dangerous.” Protocol. February 9, 2021. <https://www.protocol.com/china/chinese-microlending-out-of-control>.

¹³⁵ P.R.C. E-commerce Law (2018) [English Translation]. August 31, 2018. <https://www.chinalawtranslate.com/en/p-r-c-e-commerce-law-2018/>.

manipulation” agreement Didi signed two years prior, yet do not codify “anti-credit manipulation” stipulations into this particular law.

Looking ahead to the relative certainty of the E-Commerce Law alongside the uncertainty of whether a specialized social credit law would come to bear, the Didi representative discussed platform companies’ considerations in anticipating how to comply with future legislation. He questioned how to ensure “objective and scientific” ratings given that “your [company’s] rating system is not merely evaluations within a small community... in the future it could be a link (一环) in China’s government or social rating system (社会评价体系), so your [company’s] social rating will influence your entire society’s lives.” His comment surfaced Chinese tech companies’ awareness of the possibility that their services can become integrated with state projects in any capacity, and that the companies may design with this prospect in mind. Yet some of the issues facing both companies and the state appear to be intractable, regardless of which technological fixes are thrown at them.

In reflecting on the company’s experiences with user evaluations, the Didi spokesperson raised two conflicts that are likely to recur in credit and reputation systems in China and beyond: violations of pre-existing laws, and adequate repair mechanisms. He stressed that it was difficult for the company’s rating systems to uphold non-discriminatory principles, citing examples of how ride-hailing passengers around the world have been known to downrate drivers for subjective factors unrelated to their performance, such as gender, physical attractiveness, and willingness to sustain conversations with riders.¹³⁶ On the question of reputational rehabilitation after an individual has taken the steps to atone for or reform their behavior, he was more forthcoming about governmental oversights in the design of the social credit system.

The Didi representative also cited real examples alongside hypothetical ones that were floated in policy expert circles at that stage of the social credit system’s development. He referenced unnamed “cities that examine [people’s] political records and find them not to pass [scrutiny]; should they not be allowed to take the gaokao? Should a laolai’s children not be allowed to take the gaokao? Should petitioning [上访] influence your [standing within a] social rating system? Is this scientific?” Here he refers to whether judgment defaulters’ children should be blocked from taking the country’s college-entrance examination until their parents take action to be removed from court blacklists. I was surprised to hear a representative from a major tech company discussing— and not differentiating between— confirmed and speculative examples of how social credit might become a justification for policing these behaviors. It revealed the uncertainty that lingered even among the expert communities shaping government thinking about social credit. Moreover, this was one of several comments from conferences I attended suggesting that in these spaces, speakers could lodge more disparaging criticisms that were unlikely to circulate in Chinese mass media.

Although references to the Chinese Communist Party’s involvement in the social

¹³⁶ In much of the world, local anti-discrimination laws have yet to be directly applied to ride-hailing platforms’ driver ratings as a site of workplace discrimination. Rosenblat, Alex, K.E.C. Levy, S. Barocas, and T. Hwang. “Discriminating Tastes: Uber’s Customer Ratings as Vehicles for Workplace Discrimination.” *Policy & Internet* 9, no. 3. (2017).

credit system rarely came up in my fieldwork, the Didi representative picked up on a thread that a professor at the conference had started regarding the CCP's internal rating system for Party members. The speaker from Didi pointed out that while the Party originally "criticized people in order to help them" (治病救人), it is unfair to "completely repudiate someone because of a single error" (一棍子打死). He suggested that both state and corporate designers of credit rating systems need to build in opportunities for behavioral change and redemption—a concern that still arises in social credit legal debates today.

Didi in Crisis

In June 2021, Didi Chuxing made its IPO debut on the New York Stock Exchange. The company swiftly became the latest subject of the Cyberspace Administration of China's (CAC) control, forced to remove its app from Chinese app stores and blocked from registering new users due to the CAC's allegations that Didi had violated Chinese data protection laws. Within days, authorities claimed Didi's US IPO constituted "illegal securities activities." This accusation referred to the requirement under a recently passed US law that would call upon Chinese companies publicly traded in the US to grant access to their audit files to securities regulators if asked, or otherwise risk being delisted for noncompliance.¹³⁷ Didi's years spent cultivating ties with local governments across China did not amount to clout with the central government that would shield it from this global ignominy. The seeming severity of this crackdown nevertheless overshadows other areas where regulators may continue to allow the company to violate Chinese regulations.¹³⁸ This calls into question the limits of state-firm social credit partnerships' secondary goal of restraining tech companies' recklessness.

The story of Didi's participation in some social credit initiatives reveals tensions in the state-firm dynamic when implementing an ill-defined range of policy objectives. The examples above reveal surprisingly limited state demands of Didi. They offer no sign that individuals' data were used to evaluate them within a state-run system, instead opting for aggregated data collection to compare debt patterns between cities. Furthermore, the government seems to have avoided controlling other kinds of "untrustworthy" behaviors on the platform such as employment of migrant workers

¹³⁷ "Didi caught as China and US battle over data." Financial Times. July 6, 2021. <https://www.ft.com/content/00403ae5-7565-413e-907d-ad46549375ba>. China's 2021 data security law requires Chinese firms to seek government approval before data stored in China on Chinese users can be turned over to foreign authorities.

¹³⁸ One way the "antitrust" framing of state actions against Chinese tech companies may fall short can be seen in how big Chinese tech companies spanning multiple domains are taking advantage of the business opportunities opened up when their competitors become the targets of state control. For instance, while Didi Chuxing's app was banned, Meituan revived its ride-hailing arm that had been taken off the market in 2019 and offered drivers RMB100 to sign onto working for the platform. Didi itself was turning its focus to another of its ride-hailing apps that Chinese regulators had not wiped from domestic app stores, Piggy Express, aiming to attract younger users in smaller Chinese cities. Shepherd, Christian and Yuan Yang. "Rivals rush to take advantage of security crackdown on China's Didi." Financial Times. July 13, 2021. <https://www.ft.com/content/0dd3f1b4-705a-4ea4-9ade-3e105b4cfe1f>.

and operating black cabs. Even though both of these activities are illegal in the vast majority of cities where Didi does business, they were left out of the scope of social credit projects enlisting the company and never threatened its bottom line.

As with Ant Financial, Didi was experimenting with internal evaluations of users' "trustworthiness" well before the NDRC approached the company about signing onto memoranda or alliances, equipping Didi with experience in what would later become a requirement under the E-Commerce Law. This particular big tech firm's link to the social credit system may have been far weaker and less foreboding than foreign media accounts would suggest. It is possible that in the future this company and others will be wary to sign onto state projects that build up its image as a responsible "social organization," given the minimal returns these ultimately garnered for them.

Meituan

Meituan is best recognized for its food delivery and restaurant review platforms, although they also offer travel accommodation bookings, group-buying discounts, and a range of other services. At least two major issues the state has propagandized the social credit system as being able to mitigate are relevant to Meituan's business model: food safety and wage arrears. Yet a state-firm approach to addressing the former only came to light within the last few years, as addressed later in this section. The Chinese public's anger about the brutal working conditions for food delivery drivers quickly spread in 2020 and 2021, sparking a recent regulatory response from multiple government agencies.¹³⁹

Structured uncertainty breeds wariness of social credit

Tech companies have a stake in learning about the social credit system's evolving regulatory landscape because of their ongoing fear that the system might become too undiscerning in scope, implicating an ever-widening range of people as "untrustworthy." As in the Didi employee's presentation, my Meituan interviewee raised the concern that "many people worry... that the government will draw up a set of extremely detailed behavioral specifications. Perhaps one day [if someone] violates these behavioral specifications, his credit will be influenced. This specification might cover a broad scope, [and] lead to a feeling of dread. In everyday life [one] would need to be cautious, prudent, otherwise it would be easy to lose trust [失信]." Five years had already passed since the State Council planning outline was released, and yet these were still open questions for someone who not only closely followed social credit system developments but also participated in the communities of tech firms, government officials, and legal scholars developing it. This uncertainty extended to the Meituan representative's understanding of local pilot tests, as well.

Citing the southeastern city of Suzhou's local scoring system, "Chrysanthemum

¹³⁹ "Delivery Workers, Trapped in the System." Chuang. November 12, 2020. <https://chuangcn.org/2020/11/delivery-renwu-translation/>.

Points” (桂花分) my Meituan interviewee noted that to his understanding, Suzhou residents who visited the elderly and the ill were able to obtain reward points that could in turn benefit their children in taking China’s infamous standardized college-entrance exam, the gaokao. To him, this represented a departure from the supervisory work limited to only financial data, creating both a legal quandary and “an entire social management platform [that would] incorporate morality points, eventually affecting people’s rights and obligations.” The gaokao example, which the Didi representative also raised, suggests that on the one hand, tech firm representatives puzzled over how policymakers could have floated such law-defying practices in the first place. On the other, the companies learned to read signals about which of these proposals might affect their future products. My interviewee was also apprehensive about how evaluations of companies might overreach and cause lasting consequences.

Alternately referring to companies’ information-sharing and internally imposed restrictions on blacklisted users as “private regulation” and “co-regulation” (in English), my Meituan interviewee stressed that these partnerships occurred within existing legal frameworks and were not of great concern to him. Rather, his personal worry was for companies being excessively penalized under over-broad interpretations of a standard social credit policy phrase, “serious trust-breaking violations” (严重违法失信). In particular, he believed the act of “exposing” (曝光) these companies via blacklists and other shaming mechanisms could cause lasting reputational damage the state might overlook because “the government might feel this type of measure will be effective to compel companies to comply with administrative orders.” As with Didi Chuxing, and perhaps to a lesser extent Ant Financial, tech companies were contemplating the afterlives of their users’ data and how judgments about reputations can linger long after these data vanish.

Tech companies as ‘co-regulators’ who practice selective compliance

In 2019, I interviewed a Meituan employee who works on law and policy at the company after meeting him at a social credit legal conference in Beijing. According to him, Chinese tech company representatives who attended these conferences reflected a trend over the last five years, where major Internet companies began recruiting legal researchers such as himself, trained at the PhD level, to act as liaisons who would make policy suggestions or offer feedback on proposed policies to government entities. He framed the firms in these instances as intermediaries who “have many users, will encounter numerous problems, [and] perhaps better understand what the problems most in need of solving within this field in China are. What are the actual circumstances of these problems?” This question served as a reminder of both the government’s slight remove from on-the-ground conditions, despite international perceptions of an omniscient Chinese surveillance state, as well as of the kind of ‘ground truth’ tech company employees feel they may have clearer insights into than government actors.

This firm-side legal expertise was crucial to what he identified in English as “co-regulation,” which itself was not peculiar to China among ways that tech firms

assisted the government in implementing the law.¹⁴⁰ Echoing the Didi representative from the conference I attended months prior, he cited China's E-Commerce Law as a prime example of how firms either take on regulatory tasks or bear liability in instances when they fail to do so. Other firm-side risks, such as those involving data security, in turn create obstacles to state-firm cooperation. The Meituan representative noted that "platforms have misgivings, because if there are leaks, if a platform's competitors acquire [these data], some of the [leaked] information might include trade secrets." Much like government departments whose fear of culpability for data leaks has hampered their willingness to share data with one another, companies are similarly wary of the risks they undertake in participating in the social credit system's data-sharing mechanisms.¹⁴¹

As he pointed out, the State Credit Information Center's designation as a government-sponsored work unit (事业单位), not a regulatory agency, under the Ministry of Industry and Information Technology (MIIT) means that the Center itself cannot create regulations. This assessment echoed Alibaba and Tencent's calculus in the Baihang story. Companies' assessments of which government bureaus have the authority to compel them to share data, and their reticence to capitulate too soon to state entities whose power may be too limited to impose penalties or other consequences on a company, are part of their prudent strategy to stave off data sharing and other undesirable actions for as long as possible. Much like with the other companies in this section, however, Meituan and its peers did participate in some social credit initiatives that required changes to their platforms.

Setting boundaries of new monitoring platforms

Besides juggling competing provisions from the central government, differences in implementations from one city to another, open government information rules (政府信息公开条例), and public information management, companies factored in the one-on-one arrangements they have made under memoranda of understanding. To my interviewee's knowledge, under Meituan's MoU with the NDRC the company had not explicitly said it would partake in assisting the state with punishment of judgment defaulters. This echoed my Ant Financial interviewees' statement on the same issue almost verbatim. The Meituan employee elaborated further that platform companies themselves lack the authority to restrict luxury consumption, as this is the courts' responsibility. He also pointed out that companies like Meituan were not likely to take the initiative in establishing such agreements, and that the state would have to promote it to them. To the Meituan representative, the NDRC information-sharing MoU was merely one in a series of similar agreements both this company, and Chinese Internet

¹⁴⁰ As with many legal scholars and legal experts within tech companies who I met during my fieldwork, my Meituan interviewee mentioned having spent a year abroad at a prestigious US academic institution while completing his law PhD in China. To him, 'co-regulation' was something both US and Chinese firms did, and was not inherently problematic or indicative of collusion between the state and the firm.

¹⁴¹ Dai, Xin. "Toward a Reputation State: The Social Credit System Project of China." (2018). https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3193577.

companies in general, had struck with the government. Hinting at the beginnings of a then-recent food safety monitoring collaboration between Meituan and the government, he indicated that the government was interested in real-time data “linkage” that went beyond monitoring financial activity.

As early as 2017, media outlets in China used the term “co-governance” (共治) to describe joint efforts between regulators and the tech industry to identify and penalize illegal behavior on the latter’s platforms. Along with three other competitors in the food delivery market (Baidu Waimai, Ele.me, and Daojia), Meituan was a signatory of the Beijing Food and Drug Administration’s “Internet Food-Ordering Platforms’ Self-Discipline Alliance Convention (《网络订餐平台自律共建联盟公约》). At the signing ceremony for this alliance, a representative from the Beijing FDA commented on how companies in the food delivery subsector had raced to seize market share at the expense of ensuring food safety. He argued this justified the formation of the alliance, which the article describes as “organically integrating administrative supervision and industry self-discipline.” Meituan had already been experimenting with its internal “Sky Eye” (天眼) program for assessing restaurants and caterers on its platform, but upon joining the alliance they planned to “introduce food safety circumstances into the comprehensive credit evaluations of [restaurants and caterers with] online operations. This will influence microlending amounts and other levels of service.”¹⁴²

In light of ongoing food safety concerns in China and the increased dependence on food delivery services during the Covid-19 pandemic, in mid-2020 Meituan created a “government-enterprise connection” (政企通) system where Chinese market regulators can access information about restaurant and catering deliveries with potential food safety issues. This ‘software as a service’ (SaaS) includes features such as online applications for licenses, and automated assessment of business risks, e.g., through the use of natural language processing of user reviews to detect words that may be related to food safety concerns, such as ‘unclean’ or ‘blowfish,’ along with analysis and visualization of these data that are shared with food safety and market regulatory agencies.¹⁴³

In September 2020, Chinese media reported that Meituan signed a “E-Commerce Related Work Memorandum of Understanding” (《电子商务领域相关工作备忘录》) with the Municipal Market Supervision Administration in the city of Qinhuangdao, Hebei. Government officials can log onto Meituan’s “government-enterprise connection” platform, where they can access employee health certificates; photos from restaurant interiors, exteriors and kitchens; user complaints; and reports of illegal activity (both on the consumer and restaurant sides). Restaurants could be subjected to emergency de-listing under this system local administrators referred to as “social

¹⁴² 彭东海 [Peng Donghai]. “四大网络订餐平台将联合建立‘黑名单’制度” [“Four Major Online Food Delivery Platforms Will Jointly Establish a ‘Blacklist’ System”].《中国食品安全报》[China Food Safety Journal]. April 22, 2017.

¹⁴³ 胡湛 [Hu Zhan]. “美团‘政企通’：开启‘政府-平台’‘线上-线下’协同治理新模式” [“Meituan ‘Government Enterprise Communication Tool’: Open ‘Government-Platform’ a New Mode of Integrated Governance of ‘Online to Offline’”].《中国市场监管研究》[Research on China Market Regulation]. (2020).

co-governance.”¹⁴⁴ Brief references to this program as aiding China’s development of a broader social credit system have appeared in press coverage, folding it into the evolving concepts of “co-governance” and social trust that have come to typify state propagandizing around social credit.

The Meituan employee repeatedly stressed to me that in order to comply with Chinese law, tech firms like theirs were careful about engaging in narrow, limited data sharing with the government. He noted that at the time Meituan had 600 petabytes of data, drawing from its food takeout and delivery, financial, ride sharing, and travel booking services. Yet to his knowledge, the company was only giving the state non-personal user data from its financial and travel services. For instance, Meituan shares information from its financial services (microloans and financial management) with the Credit China website.

He drew upon the “regulatory approach” of real-time sharing of data from travel bookings with public security bureaus as one noteworthy example. This measure is justified as controlling the “floating population” issue, and requires companies including Meituan to transmit users’ reservation information such as hotel addresses, consumption amounts, and other financial details. This example served as a reminder that tech firms share a variety of aggregated data with different state actors for predefined purposes, that the social credit system’s constrained state-firm data sharing procedures are not out of the ordinary, and that where possible, companies seek to evade the “data pooling” scenario many critics assume is the norm in China.

This is not, however, tantamount to saying that these data-sharing arrangements do not have the potential to harm citizens, or that monitoring populations using aggregated data is somehow less pernicious than individualized surveillance. Controlling the “floating population” has more often become a justification for certain types of data collection and surveillance that fuel technological upgrading of police stations such as in Guizhou.¹⁴⁵

Meituan caught in the crosshairs

As of summer 2021, Meituan stared down a slew of state-imposed worker protections and reprimands from the Cyberspace Administration of China that toppled the company’s shares for weeks. In addition, a less widely commented upon area the state recently pushed the company to improve regarded the abundance of fake reviews on the platform despite Meituan’s participation in the social credit-related ‘anti-credit manipulation’ alliance.¹⁴⁶

¹⁴⁴ 高扬 [Gao Yang]. “政企牵手开展电商领域社会共治” [“Government and Enterprises Join Hands to Carry Out Social Co-Governance in Field of E-commerce”].《秦皇岛日报》[Qinghuangdao Daily]. September 4, 2020.

¹⁴⁵ Wang, Xiaowei. *Blockchain Chicken Farm*. New York: Farrar, Straus, and Giroux. (2020): 142, 149-150.

¹⁴⁶ Relatedly, it is unclear if or how social credit regulations on punishing employers for wage arrears might be expanded to address the abuses of algorithmically managed labor and delayed payment that delivery drivers have found strategic means to protest and resist. Liu, Chuxuan and Eli Friedman.

In July 2021, after months of public criticism of food delivery platforms' harsh working conditions for drivers, two groups of Chinese regulators issued guidelines meant to protect gig workers' rights.¹⁴⁷ In parallel, the CAC released a set of proposed rules for managing recommender algorithms that includes an article on work dispatch algorithms granting drivers more time to complete orders.¹⁴⁸ Separately, regulators have zeroed in on more antitrust- and anti-credit manipulation-focused demands of Meituan.

Authorities have argued that the oligopolistic nature of many Chinese tech firms forces consumers and merchants to "choose one out of two" (二选一) options, such as pressuring small businesses to choose Alibaba over a competitor when selling their goods in online marketplaces. In April 2021, SAMR fined Alibaba USD \$2.8 billion for this practice, and later that year geared up to impose a USD \$1 billion fine on Meituan for monopolistic behavior in its food delivery service.¹⁴⁹ Finally, despite the creation of an "anti-credit manipulation" alliance, SAMR ended up imposing USD \$31.8 million in fines on merchants who posted fake reviews of their products to bolster sales across multiple Chinese Internet companies.¹⁵⁰

In summary, Meituan serves as yet another example of how the state-firm dynamic of participation in the social credit system involved major tech firms making highly bounded concessions that ultimately did not save them from severe regulatory

"Resistance under the Radar: Organization of Work and Collective Action in China's Food Delivery Industry." *The China Journal* 86. (2021).

¹⁴⁷ First, the Ministry of Human Resources and Social Security and seven other government agencies issued guidelines for "new employment forms"—from food delivery and other courier services to ride hailing. The State Administration of Market Regulation (SAMR) followed on its heels with its own set of guidelines specifically aimed at ensuring delivery drivers would earn pay above their local minimum wage, and that they would be granted traditional benefits such as social security and accident insurance. Likewise, it calls for additional supports the companies have to create themselves: unions in which workers can conduct labor organizing and negotiations, and infrastructure including 'smart' helmets and meal storage lockers, as well as rest stations. Driver injuries and deaths resulted from racing to complete deliveries within the short period of time the work dispatch algorithms at Meituan and Ele.me allocate sparked public anger at the companies. In response the SAMR guidelines called for work dispatch algorithms to optimize routes to reduce accidents. Ye, Josh. "China moves to protect food delivery drivers from digital exploitation." *South China Morning Post*. July 26, 2021. <https://www.scmp.com/tech/big-tech/article/3142588/china-moves-protect-food-delivery-drivers-digital-exploitation>.

¹⁴⁸ "Translation: Internet Information Service Algorithmic Recommendation Management Provisions – Effective March 1, 2022." DigiChina. <https://digichina.stanford.edu/work/translation-internet-information-service-algorithmic-recommendation-management-provisions-effective-march-1-2022/>.

¹⁴⁹ Zhai, Keith. "China's Antitrust Regulator Planning to Fine Meituan About \$1 Billion." *Wall Street Journal*. August 6, 2021. <https://www.wsj.com/articles/chinas-antitrust-regulator-planning-to-fine-meituan-about-1-billion-11628238951>.

¹⁵⁰ Chinese merchants' practice of posting false reviews and incentivizing customers to leave them positive product reviews by offering promotions and gift cards has extended beyond Chinese e-commerce platforms. In June 2021, Amazon banned three Chinese consumer electronics companies from its platform for these practices. Zhang, Jane. "China punishes online merchants for fake reviews, inflated sales in latest market crackdown." *South China Morning Post*. July 23, 2021. <https://www.scmp.com/tech/policy/article/3142275/china-punishes-online-merchants-fake-reviews-inflated-sales-latest>.

pushback. Like Ant Financial, Meituan evaluated the authority of which government bodies issued demands before deciding if and how to comply. The sharing of aggregated data rather than targeted data sharing on individual users also mirrors the experience of the other two big Chinese tech firms this chapter addresses. Finally, Meituan's story is a reminder of how social credit initiatives were not used to combat some of the core "untrustworthy" behaviors that prop up the company's business, as was the case with Didi— hiring migrant workers and violating Chinese labor laws chief among them. Even where practices such as fake reviews were covered through Meituan's joining of the "Anti-Credit Manipulation Alliance," regulators nonetheless ended up imposing fines when these voluntary attempts at eradicating "untrustworthy" (now illegal) behavior failed.

Alliances Under Structured Uncertainty

Alliances that either government agencies or tech firms created went one step further than the memorandum of understanding model, distributing one set of responsibilities across multiple companies rather than singling them out for individual agreements with government agencies. They established clearer expectations of signatories and focused on objectives that benefited both the state and industry. At the same time, they lacked penalties for non-compliance. I provide two examples of the alliance model, with the first showing how it can be a testing ground for later policies, and the second demonstrating the crystallization of tech firms' credit norm production. Both exemplify tech company attempts to 'self-discipline' their platforms, potentially in the hopes of staving off regulations that would be harsher than the measures they imposed on themselves. Under structured uncertainty, however, it was unclear what constituted success in these alliances, which may have led to their ultimate futility.

"Anti-Credit Manipulation Alliance"

The state-initiated "Anti-Credit Manipulation Alliance" (反'炒信'联盟) and the industry-led "Sunshine Integrity Alliance" (阳光诚信联盟) laid out in Table 1 exemplify how, prior to the passage of the E-Commerce Law, the state experimented with the alliance model to nudge Chinese Internet companies toward "construct[ing] the social credit system in the field of e-commerce."¹⁵¹ The term translated as "credit manipulation" (炒信) refers to false inflation of a company's reputation, such as through leaving fake positive product reviews.¹⁵² Previously unregulated Chinese platforms similar to Amazon Mechanical Turk posted

¹⁵¹ "信用红黑名单管理制度出台'双十一'预警报告发布" ["Credit Red- and Blacklist Management System Introduced in Release of 'Double Eleven' Day Early Warning Report"].《信用中国》[Credit China]. August 9, 2019. https://www.creditchina.gov.cn/xinyongkanwu/xiliebaodao/xileibaodao1/wenzhangliebiao1/wendangliebiao/201908/t20190809_165017.html.

¹⁵² In Chinese media it is more common to see the phrase "brushing orders" (刷单) used to describe the prior steps in the micro-economy of fake review production.

jobs wherein people could receive fake packages and be paid to write false positive reviews of products they never received. Yet the suite of activities that fall under ‘credit manipulation’ spread beyond e-commerce, and called for a coordinated state-firm response in the absence of legislation. As one Chinese news outlet put it, ‘credit manipulation’ activity “destroys the ecological environment of the big data industry and the Internet economy, and threatens the foundations of the social credit system.”¹⁵³ In a show of how seriously the state took this issue, the National Development and Reform Commission, Ministry of Industry and Information Technology, State Administration for Market Regulation, Ministry of Public Security, Ministry of Commerce, Cyberspace Administration of China, and China’s customs administration were variously involved with both alliances to counter these practices.¹⁵⁴ As part of anti-credit manipulation efforts, the state-run Credit China website also published blacklists of fraudulent sellers who Chinese e-commerce platforms have flagged.¹⁵⁵

Despite the heavy government involvement in the “Anti-Credit Manipulation Alliance,” in 2016, thirteen tech companies including JD.com, Baidu, and Meituan separately formed the “Sunshine Integrity Alliance” to combat fraudulent e-commerce practices. More than 100 companies, with a collective user base surpassing 1 billion people, eventually joined.¹⁵⁶ As an instantiation of tech companies’ ‘self-discipline,’ the alliances made tech companies sound committed to benevolent Chinese conceptions of “social organizations.” Yet perhaps reflecting the limited returns from these alliances, some of their members pursued additional strategies to tackle the same problem. Alibaba has worked with Chinese law enforcement to identify over 2,800 sellers engaging in ‘credit manipulation’ activity and remove them from its e-commerce platforms since January 2018. The company’s “big data real time risk control and audit system” used methods such as ‘social [media] community anti-fraud’ algorithms and ‘logistics empty package [-detection]’ algorithms. As of late 2018, Meituan partnered with Chinese law enforcement to apprehend and penalize sellers for ‘credit manipulation,’ and has shared blacklist entries with Credit China for people who violate the terms of the “anti-credit manipulation alliance.”¹⁵⁷

Table 1: State-Firm Alliances to Combat “Credit Manipulation”

¹⁵³ “净化电商市场 政企联手反炒信” [“Cleaning Up E-commerce Market, Government and Enterprises Team Up to Counter Credit Speculation”]. 《中国招标》 [China Tendering 1]. (2017): 20.

¹⁵⁴ 刘梦雨 [Liu Mengyu]. “反‘炒信’狙击战——我国电子商务领域惩治刷单炒信行为纪实” [“Sniper War Against ‘Credit Speculation’ —A Real Account of Punishment of Fraudulent Credit Speculation in Chinese E-commerce”]. 《信用中国》 [China Credit]. December 15, 2018.

¹⁵⁵ 原勇 [Yuan Yong]. “‘红黑名单’的冷思考” [“Cold Thinking on Red- and Blacklists”]. 《中国眼镜科技杂志》 [China Glasses Science Technology Magazine]. December 12, 2017.

¹⁵⁶ 惠滢、李雅娟 [Hui Ying, Li Yajuan]. “电商诚信建设进入跨界合作时代” [“Construction of Integrity in E-commerce Has Entered Era of Cross-Border Cooperation”]. 《中国青年报》 [China Youth Daily]. December 11, 2017. http://cx.xinhuanet.com/2017-12/11/c_136816429.htm.

¹⁵⁷ 刘梦雨 [Liu Mengyu]. “反‘炒信’狙击战——我国电子商务领域惩治刷单炒信行为纪实” [“Sniper War Against ‘Credit Speculation’ —A Real Account of Punishment of Fraudulent Credit Speculation in Chinese E-commerce”]. 《信用中国》 [China Credit]. December 15, 2018.

Alliance Name	Government Participants	Tech Industry Participants
“Anti-Credit Manipulation Alliance” (反‘炒信’联盟)	• Cyberspace Administration of China • Ministry of Public Security • People’s Bank of China • National Development and Reform Commission	• E-commerce: Alibaba, Baidu, Nuomi, JD, Mia, Vipshop, Yihaodian • Social media and entertainment: Baidu, Douban, Tencent, YY • Ride-hailing: Didi Chuxing • Food delivery: Meituan • Cybersecurity: Qihoo360 • News: Toutiao • Logistics/package delivery: SF Express
“Sunshine Integrity Alliance” (阳光诚信联盟)	• China Youth Credit Action • <i>China Youth Daily</i> newspaper	• 100 companies including Baidu, JD, and Meituan

Sources for “Anti-Credit Manipulation Alliance”^{158, 159}

Sources for “Sunshine Integrity Alliance”¹⁶⁰

¹⁵⁸ The “Anti-Credit Manipulation Agreement”《反“炒信”信息共享协议书》these companies signed in 2016 committed them to cracking down on “transactions ‘suspected to be false’ (涉嫌虚假交易) and “credit hype” (炒作信用), or fraudulent behavior wherein both buyers and sellers collude by pretending to conduct a sale and leave high reviews for one another, bumping their own ratings up to the potential detriment of unknowing shoppers and new sellers alike. Under the agreement, “joint punishments” executed between the companies and the state entities involved include “limiting new account creation, blocking or deleting current accounts, limiting the release of products and services, restricting participation in various marketing and promotional activities, deducting credit points, lowering credit levels, limiting provision of Internet finance services, restricting account rights and privileges, lowering search rankings, limiting severely blacklisted delivery and logistics companies from joining e-commerce platforms, dismissal and notification suggestions for peer institutions not to employ workers from severely blacklisted deliver and logistics companies, block or delete social media accounts, [and] restrict online advertising.” “‘最强’反炒信联盟成立 刷单炒信组织者将上‘黑榜’” [“Strongest” Anti-Credit Speculation Alliance Established, Groups That Swipe Orders and Speculate Will Be ‘Blacklisted’] Xinhua. October 27, 2016.

http://www.xinhuanet.com/politics/2016-10/27/c_1119794991.htm.

¹⁵⁹ 刘梦雨 [Liu Mengyu]. “反‘炒信’狙击战——我国电子商务领域惩治刷单炒信行为纪实” [“Sniper War Against ‘Credit Speculation’ —A Real Account of Punishment of Fraudulent Credit Speculation in Chinese E-commerce”].《信用中国》[China Credit]. December 15, 2018; “净化电商市场 政企联手反炒信” [“Cleaning Up E-commerce Market, Government and Enterprises Team Up to Counter Credit Speculation”].《中国招标》[China Tendering 1]. (2017): 20; and 原勇 [Yuan Yong]. “‘红黑名单’的冷思考” [“Cold Thinking on Red- and Blacklists”].《中国眼镜科技杂志》[China Glasses Science Technology Magazine]. December 12, 2017; 沈崑 [Shen Kui]. “社会信用体系建设的法治之道” [“The Rule of Law Approach to the Construction of Social Credit System”].《中国法学》[China Legal Science 5]. (2019).

¹⁶⁰ As the lead in this effort, JD exemplified how these initiatives can become a low-stakes marketing point for companies. At an event in the “Integrity Lights up China” (诚信点亮中国) tour series the State Council and Communist Youth League set up in 2017 to promote social credit, JD’s Vice President Jiang Weihua announced that the company planned to build 1 million convenience stores around China to sell JD-authenticated products, which he averred “would be able to more effectively improve the current counterfeit goods phenomenon that congests the countryside. This is part of JD’s

Ultimately, membership in both alliances combined with these external channels of state-firm partnership were not enough to stave off state retaliation. In the summer of 2021 the State Administration for Market Regulation (SAMR) imposed USD \$31.8 million in fines on merchants who posted fake reviews of their products to bolster sales across multiple Chinese internet companies belonging to both alliances.¹⁶¹ Although the alliances catalyzed tech companies to clamp down on fraud on their platforms, the subsequent E-Commerce Law has since made many of these activities legally punishable. Ongoing “credit manipulation” activities may be due to the inadequacy of blacklisting and the other punishments the alliances signed up to enforce, especially compared with automated fraud detection. While alliances may have reduced structured uncertainty by preparing tech companies to comply with new legislation in advance, they were but one among a suite of attempts to bring companies in line with social credit objectives.

Xinyi+ and the Limited Appeal of State-Firm Reward Mechanisms

In 2016, the State Council launched a multi-company rewards project known as Xinyi+ (信易+, lit. “easy credit”), the most widely promoted state effort at inducing “good credit status” behavior through incentives tech companies provide.¹⁶² For Xinyi to

measures and methods of controlling fake goods.” 惠滢、李雅娟 [Hui Ying, Li Yajuan]. “电商诚信建设进入跨界合作时代” [“Construction of Integrity in E-commerce Has Entered Era of Cross-Border Cooperation”].《中国青年报》 [China Youth Daily]. December 11, 2017.

http://cx.xinhuanet.com/2017-12/11/c_136816429.htm

¹⁶¹ Chinese merchants’ practice of incentivizing customers to leave them positive product reviews by offering promotions and gift cards has extended beyond Chinese e-commerce platforms. In June 2021, Amazon banned three Chinese consumer electronics companies from its platform for these practices. Zhang, Jane. “China punishes online merchants for fake reviews, inflated sales in latest market crackdown.” South China Morning Post. July 23, 2021.

<https://www.scmp.com/tech/policy/article/3142275/china-punishes-online-merchants-fake-reviews-inflated-sales-latest>.

¹⁶² The plus sign tacked on to Xinyi is common among national projects to disseminate a particular concept in a wide variety of fields and tends to either be used alone (e.g., “Internet+”) or appended to specific sectors or types of institutions (e.g., “AI+education”). A 2016 policy document, the “State Council Guiding Suggestions Regarding Establishment of a Complete System of Joint Incentives for Trustworthiness and Joint Punishments for Untrustworthiness to Accelerate Promotion of the Social Credit System’s Construction,” announced that the NDRC-helmed “Xinyi” aimed to: “(7) Reduce market transaction costs. Encourage relevant departments and units to develop trustworthiness-incentivizing products such as “Xinyi Taxes”, “Xinyi Loans”, “Xinyi Bonds”, and guide financial institutions, commercial sales organizations, and other market service institutions to use market subjects’ credit information, credit points, and credit evaluations for reference. Give preference and convenience to honest market subjects, so that trustworthy people can receive more opportunities and benefits in the market.” “国务院关于建立完善守信联合激励和失信联合惩戒制度加快推进社会诚信建设的指导意见国发(2016)33号” [“Guiding Opinions of the State Council on Establishing and Improving the Joint Incentive System for Keeping Trust and Joint Punishment for Untrustworthy and Accelerating the Construction of Social Integrity (2016) No. 33”]. State Council. June 12, 2016.

http://www.gov.cn/zhengce/content/2016-06/12/content_5081222.htm. As of 2018, there was also talk of creating two more categories, “信易医” (Xinyi Medicine) and “信易阅” (Xinyi Reading), for hospital services and libraries, respectively. ““信易+” 红利 ——我国在重点民生领域推行守信激励系列项目扫描”

function, the National Credit Information Sharing platform integrates data from over 44 government bureaus and over 63 market institutions including the companies listed in Table 2. Market entities pull collated credit records and make decisions about implementing rewards within the purview of the services they provide.¹⁶³ On one level, Xinyi+ replicates rewards companies proffered in their user loyalty programs, while balancing out the relatively thin rewards schemes of the social credit system's 'joint punishments and rewards.' In contrast with severe portrayals of the social credit system as enabling the state to crack down on judgment defaulters through shaming and other levers of punishment, Xinyi projects come packaged with feel-good media anecdotes about how records of trustworthy behavior open up new opportunities for entrepreneurs and make everyday life more convenient.

["Xinyi+' Benefits — China Implements Series of Trustworthy Incentive Programs of in Main Areas of People's Livelihoods"]. Credit China. May 23, 2019. https://www.creditchina.gov.cn/xinyongkanwu/xiliebaodao/xileibaodao1/wenzhangliebiao1/wendangliebiao/201905/t20190523_156479.html.

¹⁶³ Airbnb partook in the Shanghai NDRC's "Shanghai Youth Trustworthy Joint Incentives Plan 2.0" (上海青年守信联合激励行动计划2.0), through its now-shuttered local Chinese version, called Aibiying (爱彼迎). The company offered red envelopes—in which Chinese families and employers often gift cash during holidays, and which have been digitized to accommodate mobile payment platforms—of USD\$200 each to volunteers who fit the state-created category of "five-star trustworthy youth." "'信易+' 红利 ——我国在重点民生领域推行守信激励系列项目扫描" ["Xinyi+' Benefits — China Implements Series of Trustworthy Incentive Programs of in Main Areas of People's Livelihoods"]. [Credit China]. May 23, 2019. https://www.creditchina.gov.cn/xinyongkanwu/xiliebaodao/xileibaodao1/wenzhangliebiao1/wendangliebiao/201905/t20190523_156479.html.

Table 2: Xinyi+ Rewards Program

Xinyi+ Sub-Project	Participants	Benefits
Xinyi Approval	• Sesame Credit • Local governments¹⁶⁴	• Creates “green channels,” or express queues, for licenses and other documents requiring administrative approval.
Xinyi Loans	• JD Finance • WeBank	• Easier financing of SMEs.
Xinyi Rental	• Hewlett-Packard • Lenovo • Sesame Credit¹⁶⁵ • WeWork¹⁶⁶	• Better rates for office space and equipment for entrepreneurs.
Xinyi Transportation	• Didi Chuxing • Tencent Credit	• Didi takes in red- and blacklist information to administer punishments and rewards on the platform as well as to “enrich the monitoring and early warning systems of credit cities.” Redlisted riders are prioritized in Didi’s in-app ride-hailing

¹⁶⁴ Ant Financial’s Sesame Credit has also been used in the Xinyi Approval program on a local basis. In the Zhenru neighborhood of Shanghai’s Putuo district, residents with high Sesame Credit scores are able to access expedited online processing of bureaucratic procedures such as certificate filing through the neighborhood’s own “Credit Zhenru” platform. Most notable was the “Dibao Certification” process, which digitally processes citizens’ documentation related to the national welfare program, Dibao, raising questions about this non conditional cash benefits program’s potential to be digitally monitored in the future.” “‘信易+’ 红利 ——我国在重点民生领域推行守信激励系列项目扫描” [“Xinyi+’ Benefits — China Implements Series of Trustworthy Incentive Programs of in Main Areas of People’s Livelihoods”]. Credit China. May 23, 2019.

https://www.creditchina.gov.cn/xinyongkanwu/xiliebaodao/xileibaodao1/wenzhangliebiao1/wendangliebiao/201905/t20190523_156479.html; and “‘They Don’t See Their Work as Surveillance’: Jennifer Pan on Chinese Welfare and Society. Public Books. June 30, 2021.

<https://www.publicbooks.org/they-dont-see-their-work-as-surveillance-jennifer-pan-on-chinese-welfare-and-society/>.

¹⁶⁵ Although Ant Financial’s Sesame Credit is part of the “Xinyi Rent” project offering deposit waivers and discounts on rent, one of their PR representatives indicated to me that as of 2018 this was only restricted to commercial use (i.e., where companies are the users) such as office rentals, and did not extend to home rentals. It is unclear if the determination to offer Xinyi benefits in the Ant case are based on companies having high enterprise credit ratings within Sesame Credit, being named on sectoral red lists within their industry, or additional factors.

¹⁶⁶ Entire neighborhoods in cities such as Chongqing, Nanjing, Xiamen, Chengdu, and Suzhou, along with state-owned banks, also participated. “‘信易+’ 红利 ——我国在重点民生领域推行守信激励系列项目扫描” [“Xinyi+’ Benefits — China Implements Series of Trustworthy Incentive Programs of in Main Areas of People’s Livelihoods”]. [Credit China]. May 23, 2019.

https://www.creditchina.gov.cn/xinyongkanwu/xiliebaodao/xileibaodao1/wenzhangliebiao1/wendangliebiao/201905/t20190523_156479.html.

		queue, to receive discounted rides, and to rent deposit-free bicycles.¹⁶⁷ • Tencent Credit mini-program within its WeChat messaging app connects with China's national toll collection system, Electronic Toll Collection (ETC) to "integrate WeChat credit rating information [into] forming [an] ETC user credit rating database." Rewards include toll discounts and waived tolls.¹⁶⁸
Xinyi Travel	CTrip	• Reducing tourists' fares for air, rail, other transportation, and lodgings. • Priority check-ins, or elimination of check-in, check-out, and queuing for sightseeing.¹⁶⁹

On another level, Xinyi+ is a distraction from how the tech companies supplying these perks have themselves corroded societal trust in the fields where they administer rewards, such as housing and finance. The Xinyi+ alliance lent companies the veneer of a form of corporate social responsibility, in which incentivizing people to behave with

¹⁶⁷ "'信易+' 红利 ——我国在重点民生领域推行守信激励系列项目扫描" ["Xinyi+ Benefits — China Implements Series of Trustworthy Incentive Programs of in Main Areas of People's Livelihoods"]. Credit China. May 23, 2019. https://www.creditchina.gov.cn/xinyongkanwu/xiliebaodao/xileibaodao1/wenzhangliebiao1/wendanliebiao/201905/t20190523_156479.html. On March 7, 2018 the NDRC signed a "Credit Information Sharing Cooperative Agreement"《信用信息共享合作协议》with Didi Chuxing. Ride-hailing companies have also joined the Xinyi Transport project. One Didi representative claims the company conducted pilot tests on 400 million passengers across at least 5 of the company's service types including bike rentals. In a media interview, a Didi Chuxing employee stated that redlists are generated by drawing from both the State Credit Information Center's data sharing platform (全国信用信息共享平台) and Didi's user data to conduct "comprehensive credit evaluations" (综合信用评价). It is unclear what method is used to determine these Didi users' "trustworthiness."

¹⁶⁸ "'信易+' 红利 ——我国在重点民生领域推行守信激励系列项目扫描" ["Xinyi+ Benefits — China Implements Series of Trustworthy Incentive Programs of in Main Areas of People's Livelihoods"]. Credit China. May 23, 2019. https://www.creditchina.gov.cn/xinyongkanwu/xiliebaodao/xileibaodao1/wenzhangliebiao1/wendanliebiao/201905/t20190523_156479.html.

¹⁶⁹ 邱海峰、王青青 [Qiu Haifeng, Wang Qingqing]. "信用红黑名单这样影响生活" ["This is How Credit Red- and Blacklists Influence Life"]. 人民日报海外版 [People's Daily overseas edition]. July 11, 2018. <https://www.society.people.com.cn/n1/2018/0711/c1008-30138986.html>.

integrity (诚信, chengxin) became a moral obligation. Over years of increasing backlash against Chinese tech firms for monopolistic and deceptive practices, any public goodwill was valuable. Firms likely also participated in Xinyi+ schemes to attract new users at a time when much of the tech industry came under fire for exacerbating economic and social ills. Peer-to-peer (P2P) micro-lending has long been rife with fraud and excessive borrowing, often of people taking out new loans on different platforms in order to pay off earlier ones.¹⁷⁰ Despite government efforts to crack down on the most unscrupulous fintech companies, a wave of non-fintech companies were not deterred from offering their own microlending products to attract new users who might then become interested in their other services.¹⁷¹ Similarly, the housing rental market has been tumultuous for some as startups pocketed tenants' rent money for their own financing. Unaware of this backend deception, landlords who assumed that tenants were not paying rent then changed locks and stopped paying utilities bills while tenants still occupied their rental units.¹⁷²

As with each company case above, these well-known incidents ended with state reprimands, although in the microlending and housing markets many users suffered uncompensated financial and other losses. It is unclear how the Chinese public

¹⁷⁰ Unlike bank-facilitated online lending, "true" P2P lending occurs when platforms link lenders and borrowers, and repay the former only when the latter have paid off their loans. According to Martin Chorzempa of the Petersen Institute of International Economics, factors that led to a slower response to fraudulent and otherwise harmful P2P lending included local governments' inability to monitor the platforms' activities all across China, along with their own reliance on P2P lenders to provide government projects with funding. In addition, he found that a veneer of state approval of P2P lending— from both P2P platforms and local governments publicly playing up their relationships with each other, to Premier Li Keqiang's touting of the broad "Internet+" push to inject an online component into all areas of life—may have misled people into relying on these companies in a manner he describes as reminiscent of US mortgage borrowers prior to the 2008 financial crash. A smattering of regulatory actions have attempted to curb the excesses of P2P lenders, but as of 2019, Chinese P2P lenders still had a staggering 87.2% loan default rate. More than 60% of the 5,000-plus domestic online P2P lending companies had shuttered operations by 2018, and over the next two years regulators managed to reduce the number still operating to 29. Chorzempa, Martin. "Massive P2P Failures in China: Underground Banks Going Under." Peterson Institute for International Economics. August 21, 2018. <https://www.piie.com/blogs/china-economic-watch/massive-p2p-failures-china-underground-banks-going-under>; Gao, M., J. Yen, and M. Liu "Determinants of defaults on P2P lending platforms in China." *International Review of Economics and Finance* 72. (2021): 334–348; Jiang, Jinglin and L. Liao, Z. Wang, X. Zhang. "Government Affiliation and Peer-To-Peer Lending Platforms in China." *Journal of Empirical Finance* 62. (2021): 87.

¹⁷¹ Yang, Zeyi. "Chinese microlending is getting weird and dangerous." *Protocol*. February 9, 2021. <https://www.protocol.com/china/chinese-microlending-out-of-control>. Younger Chinese citizens, especially recent university graduates with little to no formal credit history, are a group known for being drawn to these loan products and for ending up indebted to them. They are also in greater debt and have lower savings than older generations in China. "How China's Young People Became Addicted to Debt." *South China Morning Post*. May 28, 2017. <https://www.scmp.com/news/china/economy/article/2096019/how-chinas-young-people-became-addicted-debt>.

¹⁷² Feng, Emily. "Scandals In China Bring Calls For More Regulation Over Tech Companies." *NPR*. February 5, 2021. <https://www.npr.org/2021/02/05/964379930/scandals-in-china-bring-calls-for-more-regulation-over-tech-companies>.

perceives the Xinyi+ program's rewards, or to what extent they might have temporarily diverted criticisms of tech firms. In today's China, the state and citizens are exhibiting a sentiment akin to 'techlash' in the United State—making it much less probable now that rewards schemes can buy companies a rosier reputation.

Conclusion: Structured Uncertainty Leaves Firms at a Standstill

This chapter illustrated how three major Chinese companies responded to loosely-defined directives for co-producing the technology of the social credit. Prior research on the social credit system assumes tech companies uncritically accepted demands from the central government to share user data and sign memoranda of understanding on joint punishments and rewards. These narratives imply that the state conveyed a 'correct' approach to implementing social credit and that companies simply fell in line. Using interviews with and conference talks from representatives of Ant Financial, Didi Chuxing, and Meituan alongside Chinese news media, however, I show that the companies were not given straightforward guidance and strategically adapted to shifting demands using a variety of approaches.

Unsure of how the credit sector might come to rely on artificial intelligence within China, Ant Financial looked abroad to the United States and Europe to understand how regulatory trends there might come to influence the Chinese market. This spoke to what one of their representatives framed as "lagging" research and understanding in China of how credit economies were using machine learning, and possibly reflected the company's own desire to shape developments in this field at home.

Ant Financial and Meituan both reveal how companies gauged which government demands they could resist complying with, without incurring immediate consequences. They recognized that not all government bodies bore the same authority, and practiced noncompliance where they felt it was necessary to protect business interests. In Ant's case, this involved deeming the quasi-state National Internet Finance Association insufficiently authoritative to require Ant to share its credit data with the Baihang Credit Union. In Meituan's, their representative pointed out that the State Credit Information Center itself could not create regulations. This sizing up of different levels of the bureaucracy and their relative power also created an opening for firms to craft their own 'self-disciplinary' solutions as a way to preempt regulation.

Didi and Meituan have both offered aggregated data to specific government agencies as a way of monitoring their users and the platforms themselves. Didi shares city-level 'credit' data about riders' debts, whereas Meituan has created platforms to detect and issue early warnings about food safety issues at restaurants that use the platform. Similarly, Didi was testing out 'credit'-related rider and driver scoring systems internally in anticipation of the passage of China's recent E-Commerce Law, which contains a stipulation about platforms generating ratings of users that essentially amount to reputational evaluations.

Breznitz and Murphree refer to structured uncertainty as "an agreement to disagree about the goals and methods of policy," which came out in the worry and

skepticism I saw in the representatives from Didi and Meituan. Both expressed fears that social credit could overstep the law and attempt to regulate morality, and that their companies would be tasked with deciding if and how to cooperate. Participation in these social credit initiatives did not ultimately garner enough goodwill to keep the three firms from the Chinese government's recent regulatory crackdown. Neither joining alliances to combat 'credit manipulation' or signing on as providers in rewards programs meant to incentivize 'trustworthy' behavior helped the companies, either, even though the latter had the potential to divert attention from companies' own complicity in a loss of societal trust. This may disincentivize them from voluntarily signing onto alliances, rewards programs, and other such non-binding arrangements in the future.

Whereas this chapter touched upon how these three companies, among others, were "credit norm producers" who shaped what rewards could look like in the 'joint punishments and rewards' feature of social credit, an under-examined set of firms in the social credit system's story figures in Chapter 3. Thousands of small companies win bids to build the system's technological infrastructure through China's government procurement processes. They act as what I call "intermediaries," developing an extensive range of services to fill in many of the gaps that major tech companies have left unaddressed at city and province levels.

As I show in the next chapter, small tech firms are eager to capitalize upon new markets that government-sponsored projects give rise to, and will continue to be rule-takers in the procurement process. They construct what is essentially the "grout" holding these massive state projects together—the bespoke local hardware and software specific to each region, creating the illusion of a centralized top-down system, and developed in a way that is consistent with patterns laid out in the studies of "experimentation under hierarchy" in China. These small firms' approach to working with mostly local governments exhibits an entirely different dynamic than what the first two chapters cover regarding China's tech giants. At the same time, my interviews with smaller tech companies and related city government institutions revealed that the imprint of Ant Financial and similar major tech companies in China is inextricable from the ideals local governments strove for, and that the small-scale firms tasked with producing and maintaining hardware and software of the social credit system simultaneously sought to emulate while distinguishing themselves from the tech giants.

Chapter 4

‘Intermediaries’ Sustain Credit Cities: How Local Governments and Small Tech Firms Co-design and Implement Scoring Systems

Introduction

One of the least-discussed aspects of the social credit system is a feature that demonstrates how similar it is to other large policy projects involving tech industry cooperation: the patchwork, bottom-up approach to its on-the-ground implementation across dozens of cities around China. Tech companies will continue to enter the bidding process to secure government contracts for building the state’s technological infrastructure, from surveillance cameras to courtroom AI, public sentiment monitoring software, and more. Unique to social credit is how the system’s development, which in theory could serve as a check on corruption in procurement processes, instead reveals the state’s shortcomings in achieving the very aims of transparency, accountability, and trust-building that allegedly underpin the entire project.

The first part of this chapter connects open government information (OGI) in China, the insertion of accountability and oversight into the procurement process, and how data the state produces about procurement is being used to create checks on corruption and nepotism. Attempts to make information about the state and firms openly available to citizens have repeatedly failed at satisfying the need for meaningful accountability. Transparency at its core is about the production of accounts, and from a citizen perspective much of the information shared through social credit initiatives is undesired, incomplete, and ultimately ineffectual on its own at producing change. Understanding the connection between OGI and procurement is crucial for then examining the companies that win contracts to build the infrastructure of the social credit system.

The second section of the chapter takes a city-level view of the relationships between government agencies and small firms that partner with them through the procurement process. Through two group interviews with city government officials in Xiamen and Fuzhou (Fujian), as well as secondary source literature on “credit cities,” I show how Structured uncertainty stemming from the central government’s lack of clarity on how exactly to implement the sweeping 2014 State Council social credit planning document resulted in small firms and local governments forming market and consultative relationships to work out what social credit could look like in practice. The “positive logic” that began within the major tech companies’ rewards schemes traveled to these city scoring systems. Contrary to misperceptions about these systems, low scores do not incur punishments. Instead, cities can only encourage citizens to conduct themselves in ways that might raise their scores, such as by donating to charity or doing

volunteer work, and in turn are offered rewards such as deposit-free library book rentals or expedited processing of administrative licenses. As part of this “positive logic,” local governments’ fears of overstepping legal boundaries ensured that few features of local pilot tests were entirely new, even within the profusion of custom-made apps and web platforms for cities’ individual scoring systems. Instead, continuations of familiar solutions to long-standing problems are re-purposed and combined.

The third section zooms in on the experience of one of these small firms. The academic literature on social credit has largely overlooked these firms, and when addressing them has not gauged where they fit within the market for social credit technology.¹⁷³ Whereas structured uncertainty deterred large tech firms from becoming heavily involved with social credit implementations, it contributes to a near-opposite effect on small companies. Structured uncertainty created opportunities for them to serve as what I call “intermediaries” who translate policy and technological expertise into additional services they can provide to local government officials. My interview with a representative of one such firm in Suzhou reveals how his company participates in a community of similar firms and credit experts to decipher and produce knowledge about new social credit developments. This communal interpretation work gets channeled back into training sessions they hold for local government officials, among other consultations the firms offer.

Taking one step back to survey the outcome of these state-firm relationships, this chapter looks to the relatively low uptake and lack of public interest in the municipal social credit implementations to ask: who are these apps, platforms, and local scoring systems *for*? The limited Chinese media coverage of these pilot tests contain statements from government officials suggesting their motivations stem from a primary desire to boost the appearance of legitimacy, and a secondary goal of serving a perceived public need for stronger mechanisms of social trust. The latter poses as a type of “service-oriented governance” (driven by needs citizens themselves identify) while functioning much more like “management-oriented governance,” which political scientist Iza Ding characterizes as “more paternalistic, defining citizens’ needs before addressing them.”¹⁷⁴

Social credit is one of many state projects that indicates what might happen when technology becomes instrumental to what Ding calls “performative governance.” The courts’ continued struggles to enforce court orders against judgment defaulters, and city governments’ lack of resources to attract individuals to using their local pilot test apps and scoring programs (in part due to the unexciting rewards these governments can afford to subsidize) point to low capacity at both curbing problems social credit is designed to address and at ginning up enthusiasm for a solution derived under “management-oriented governance.” Whereas the social credit system treats a variety of trust-related issues as all stemming from information asymmetries and a lack of transparency, bottom-up, citizen-directed efforts at seeking information reveal the performative aspects of this transparency theater.

¹⁷³ Zhang, Chenchun. “Governing (through) trustworthiness: technologies of power and subjectification in China’s social credit system.” *Critical Asian Studies* 52, vol. 4. (2020).

¹⁷⁴ Ding, Iza. “Performative Governance.” *World Politics* 72, no. 4. (2020): 540-541.

Procurement Data and the Potential for Transparency

Governments' outsourced production of public sector goods and services to private companies is not a novel phenomenon. Yet when it comes to acquisition of technology for law enforcement and military use, this state-firm dynamic has become the subject of mounting public scrutiny since the turn of the millennium. The 2001 attacks on the World Trade Center spurred the growth of domestic US markets for surveillance technology that continue to shape policing in cities across the country today. The precedent this set for state adoption of policing technology reverberated globally, from Xinjiang to Sub-Saharan Africa.¹⁷⁵

Investigations into how governments acquire private sector technology for public sector use in both China and the United States have burgeoned in recent years. In the United States, Freedom of Information Act (FOIA) requests for documents related to government procurement of technology have fueled journalistic and civil society investigations into the functions and abuse of surveillance technologies in particular.¹⁷⁶ Government procurement of technology is fragmented at federal, state, and municipal levels in the United States, another parallel shared with China at the national, provincial, and city levels. Efforts to make US datasets publicly accessible and easier for researchers and the media to sift through and analyze are also gaining popularity.¹⁷⁷ Revelations about how a range of policing technologies are used to disproportionately target people of color and other marginalized communities have inspired research, activism, and the creation of surveillance technology oversight ordinances in cities including Oakland, San Francisco, Seattle, and New York. Research has spotlighted the pernicious incentives firms are tasked with encoding in product design in fields such as child protective services¹⁷⁸, as well as government officials' lack of knowledge about how private firms may use citizens' data within these public-private partnerships.¹⁷⁹ Each new instantiation has raised awareness of the harms lingering beneath the surface of taken-for-granted technological infrastructure, leading to recommendations to guide governments early in the procurement process.¹⁸⁰

¹⁷⁵ "China's Algorithms of Repression: Reverse Engineering a Xinjiang Police Mass Surveillance App." Human Rights Watch report. May 1, 2019. <https://www.hrw.org/report/2019/05/01/chinas-algorithms-repression/reverse-engineering-xinjiang-police-mass>; Gagliardone, Iginio. *China, Africa, and the Future of the Internet*. London: Bloomsbury. (2019).

¹⁷⁶ MuckRock, <https://www.muckrock.com/>.

¹⁷⁷ Tech Inquiry, <https://techinquiry.org/>.

¹⁷⁸ Eubanks, Virginia. *Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor*. New York: Macmillan. (2018).

¹⁷⁹ Brauneis, Robert and E.P. Goodman. "Algorithmic Transparency for the Smart City." *Yale Journal of Law & Technology* 20.(2018): 103-176.

¹⁸⁰ Sloane, Mona, R. Chowdhury, J.C. Havens, T. Lazovich, and L.C.R. Alba. "AI and Procurement: A Primer." (2021). <https://doi.org/10.17609/bxzf-df18>; Hebbar, Nidhi. "School Procurement Guide: Buying Edtech Products with Racial Equity in Mind." https://coda.io/d/School-Procurement-Guide_dYBoc7ujwQA/School-Procurement-Guide_su9mx#_luZQD.

Oversight that grants multiple stakeholders equal influence is far from the reality on the ground in China. However, attempts to use procurement data for transparency both within China and from researchers outside of the country have revealed significant details about the state surveillance apparatus.¹⁸¹ Changes to the procurement process pre-date the availability of this data. Political scientist Wendy Leutert charts how in the 1990s, a combination of wasted expenses, political corruption, and acquisition of low-grade materials inspired the Chinese government to update how procurement was done. The process came to be reshaped through iterative experimentation Leutert terms as “policy feedback loops.”¹⁸² Through a policy feedback loop that tested changes to the procurement process, the State Council issued a set of stipulations that made comparisons of price and quality across multiple suppliers common practice, cracked down on corruption and abuse, and made the procurement process more transparent.¹⁸³ This early development foregrounded a related pattern in the social credit system.

Over time, the production of openly available government information on procurement became a way of tracking which government agencies were releasing project proposals, which companies were placing bids for tender, and the amounts that were finally awarded to the winning bids. Chinese government procurement databases list one- or two-sentence descriptions of a project, and at times include attached documents that shed further light on the nature of a project, such as product brochures or marketing materials from companies. Unable to travel to China during the Covid-19 pandemic, foreign observers have turned to procurement data for a granular view of the Chinese government’s information technology acquisition and implementation, garnering insights about the underlying logic of state surveillance¹⁸⁴ and the competitive advantages conferred to firms that access government-generated datasets.¹⁸⁵

Open Government Information in China

Social credit developments unfolded on the tail of open government information (OGI) initiatives in China, and many of the main stumbling blocks of this latter project recurred within efforts to advance the social credit system. On the state side,

¹⁸¹ Beraja, Martin, D.Y. Yang, and N. Yuchtman. “Data-intensive Innovation and the State: Evidence from AI Firms in China.” *Review of Economic Studies* (Forthcoming). (2022).

http://davidyang.com/pdfs/ai_draft.pdf.

¹⁸² Leutert, Wendy. “Innovation through iteration: Policy feedback loops in China’s economic reform.” *World Development* 138. (2021).

¹⁸³ Leutert, Wendy. “Innovation through iteration: Policy feedback loops in China’s economic reform.” *World Development* 138. (2021): 26.

¹⁸⁴ Batke, Jessica, and M. Ohlberg. “State of Surveillance: Government Documents Reveal New Evidence on China’s Efforts to Monitor Its People.” *ChinaFile*. October 30, 2020.

<https://www.chinafile.com/state-surveillance-china>; Xiao, Muiyi, P. Mozur, I. Qian, and A. Cardia. “China’s Surveillance State Is Growing Bigger and More Invasive. These Documents Reveal How.” *New York Times*. June 21, 2022. <https://www.nytimes.com/video/world/asia/100000008314175/china-government-surveillance-data.html?partner=slack&smid=sl-share>.

¹⁸⁵ Beraja, Martin, D.Y. Yang, and N. Yuchtman. “Data-intensive Innovation and the State: Evidence from AI Firms in China.” *Review of Economic Studies* (Forthcoming). (2022). http://davidyang.com/pdfs/ai_draft.pdf.

government departments' struggles to retrieve data from one another—and difficulties translating these data once acquired, given differences in formatting between departments—have hampered both OGI and social credit. On the citizen side, activists have used the OGI process as a lever for prying open a closed-off state. Over the course of more than a decade, a feedback loop developed whereby litigants in Chinese courts used OGI to conduct a form of political activism. Judges and local officials then grew accustomed to and systematically thwarted these types of cases.¹⁸⁶

Mainstream commentary on Chinese cybersecurity developments acknowledges the Snowden revelations as a turning point that catalyzed the creation of foundational legislation and institutions such as the Cybersecurity Law and the Cyberspace Administration of China. Despite this, few have questioned the influence this event had on Chinese citizens' thinking about their own government's surveillance apparatus. In 2014, a Chinese lawyer's attempt to secure OGI records from the Ministry of Public Security on its domestic surveillance practices was unsuccessful. Nonetheless, it signaled resistance against increasingly powerful and shadowy state efforts at invasive monitoring of everyday life.¹⁸⁷ While some types of information that became accessible as OGI (e.g., information on environmental pollution, government spending, and food safety issues) are directly related to phenomena that nascent social credit regulations target, additional citizen-led efforts to acquire and analyze this information suggests that social credit transparency initiatives fail to disseminate the information people demand. Open government information and use of it for procurement tracking, for instance, are forms of transparency and accountability that fall outside of the social credit system's intended scope.

Critical anti-surveillance analyses are rare within China, but at least two directions for commentary based on procurement data have emerged there: 1) research reports that assess factors such as cost and types of projects funded over time; and 2) academic research highlighting how procurement data can be used as a check on the types of state-firm collusion and corruption that the social credit system (among other policy projects) aims to eradicate. A prime example of the first type of commentary came from one of the leading WeChat Public Accounts for social credit news and policy analyses, Yuandian Credit. Within WeChat, public accounts contain features akin to blogs, official Twitter accounts, and Substack-style newsletters in the United States.¹⁸⁸

My interviewee who worked for a small firm in Suzhou that provides consultations to local governments in their local social credit pilots was also a founding

¹⁸⁶ Kim, Jieun, R.E. Stern, B.L. Liebman, and X. Wu. "Closing Open Government: Grassroots Policy Conversion of China's Open Government Information Regulation and Its Aftermath." *Comparative Political Studies* 55, no. 2. (2022).

¹⁸⁷ Horsley, Jamie. "China's Freedom of Information Act Turns Eight." Wilson Center. May 2, 2016. <https://www.wilsoncenter.org/article/chinas-freedom-information-act-turns-eight>.

¹⁸⁸ Public accounts can be run by individuals as a type of outlet for freelance journalism that subscribers pay for in a tipping model (similar to Patreon), by groups of experts or enthusiasts on a particular topic, or by pre-existing institutions such as schools, firms, and newspapers. Li, Jing. "Liberating or Constraining? How technology capital is reshaping the media landscape in China." Reuters Institute report. 2017. <https://reutersinstitute.politics.ox.ac.uk/our-research/liberating-or-constraining-how-technology-capital-reshaping-media-landscape-china>.

member of Yuandian Credit. According to him, when social credit gained policy momentum and attention around 2014-15, his and other companies were in communication with one another about grouping up to learn more about the topic together. Among the reasons he gave for why he and others with an interest in social credit— from companies in the ‘credit’ sector, broadly construed, to academics and tech industry insiders— felt the need to start such an account was his belief that Chinese academic research on the subject was lagging behind changes in the law. They quickly realized that of the few hundred books about credit they could find in libraries around China (and given the comparative dearth of material online), most books focused on financial credit (征信 *zhengxin*), providing little to no guidance on the multivalent conceptions of credit that the social credit system would soon espouse.

As this community of people archiving, researching, and writing about social credit expanded, they established Yuandian Credit’s WeChat Public Account as a form of “independent media” (自媒体) with goals including educating the account’s followers about current developments in social credit, local variations on its implementation, and theoretical research. At the time, Yuandian had a total of 700 to 800 followers, primarily experts who were themselves building or participating in the implementation of the social credit system. Even as of 2019, he found that official Chinese media dedicated to social credit required collective parsing and translation for non-expert audiences. To him, the Credit China website, as

“the most authoritative source... in the end represents the official [government position], and relatively speaking its readability is poor... When we see official documents, it’s exhausting, whether they’re Chinese or foreign. It was on this basis that we made a [WeChat] public account.”

This critique of Credit China serves as a reminder that even five years after the State Council’s social credit planning document was released, structured uncertainty around social credit’s definition and goals persisted, with constant, communal analysis filling in to ensure that the market for its associated services would function.

A team of experts who participate in the Yuandian Credit public account scraped open source government procurement data from 2012-18 that contained keywords related to the social credit system. They published a report based on this data through Yuandian’s WeChat Public Account, primarily focusing on questions of how expenses changed over time, such as when funding shifted from paying for hardware and software towards paying for maintenance of both. The dataset, which they shared with me through a Chinese law professor and coauthor of mine, comprised 1,300 government procurement orders.¹⁸⁹ Major “BATJ” (Baidu, Alibaba, Tencent, and JD) companies were virtually absent from the dataset. The vast majority of orders were instead granted to small, local tech firms which often included the name of their city or province in their company names. Contrary to popular foreign perceptions of social credit as being directly tied to traditional surveillance technologies, none of the project

¹⁸⁹ For the original report analyzing this dataset, see “7年30亿：招标视角下的信用中国” [“3 Billion in 7 years: Credit China From a Procurement Perspective”] Yuandian Credit report.

descriptions referenced facial recognition, the Internet of Things, sensors, or other types of tech applications that separately operate within China.

Two slightly more concerning developments in the dataset involved public opinion (輿情) monitoring and state media giant Xinhua's monitoring of credit among the countries that make up the international One Belt, One Road (OBOR) infrastructure and investment project.¹⁹⁰ Public opinion monitoring, often conducted through the mass collection and automated sentiment analysis of social media text, has become more common in China during the Covid-19 pandemic as a way of tracking citizens' levels of satisfaction with the government's response.¹⁹¹ None of the specific projects in the dataset were explored in greater detail in the Yuandian report itself. This type of trend mapping shies away from taking a normative stance, tending more towards market research that might inform companies in the Yuandian community of how their products can meet demand for hardware, software, and services in the build-out of the social credit system.

The second kind of Chinese commentary on procurement data has lauded the digitization of the procurement process as paving the way to weeding out companies who game the bidding procedure. They see this as its own kind of loop where procurement data can fuel the social credit system's imperative of reducing information asymmetries between the state and enterprises in order to eradicate 'untrustworthy' commercial activity. This is not specific to China; the US Department of Health and Human Services, for instance, uses an algorithmic tool to evaluate procurement decisions.¹⁹² The Chinese government moved in this direction in 2013, a year before the State Council released the social credit Planning Outline.

The NDRC was one of eight government ministries to collectively issue "Electronic Procurement Bidding Measures" in 2013. Regulations have shaped the online bidding process such that it takes place across "trading platforms," "administrative supervision platforms," and "public service platforms."¹⁹³ When the NDRC and seven other ministries issued the "'Internet+' Bidding and Procurement Action Plan (2017-2019)" 《“互联网+”招标采购行动方案(2017—2019年)》, they

¹⁹⁰ Of the two public opinion monitoring projects, one was 2017 order with a project description of "Credit big data public opinion monitoring and credit situation evaluation services project" ("信用大数据舆情监测与信用状况评估服务项目") that the Beijing Municipal Economic and Informatization Committee (北京市经济和信息化委员会) placed. The second was placed by the local NDRC of the city of Baicheng in Jilin province, for "Baicheng City National Development and Reform Commission Credit System Construction Public Opinion Recommendation Services" ("白城市发展和改革委员会信用体系建设舆情推介服务"). The OBOR monitoring project was an order the China Economic Information Service (中国经济信息社有限公司), a subsidiary of Xinhua, made in 2017 for "'One Belt, One Road' Economic Information Service Project- Enterprise Credit Product Service Platform Project" ("一带一路"经济信息服务项目--企业信用产品服务信息平台项目).

¹⁹¹ Wu, Angela X. "Chinese Computing and Computing China as Global Knowledge Production." *Catalyst: Feminism, Theory, and Technoscience* 6, no. 2. (2020.)

¹⁹² Engstrom, David Freeman, D.E. Ho, C. Sharkey, and M. Cuéllar. "Government by Algorithm: Artificial Intelligence in Federal Administrative Agencies." (2020): 10.
<https://www-cdn.law.stanford.edu/wp-content/uploads/2020/02/ACUS-AI-Report.pdf>.

¹⁹³ 张永旺 [Zhang Yongwang]. "建设工程电子招标数据应用场景分析" [Analysis of Application Scenarios for Digital Procurement Data on Construction Projects]. 《中国管理信息化》[China Management Informationization 9]. (2019): 159.

emphasized the need to produce data that would monitor the bidding process, in part to feed into the nascent social credit system's efforts to track and penalize companies for legal violations.¹⁹⁴ The Action Plan called for

“using big data [from] digital procurement transactions to dynamically produce basic credit information on people seeking bids, bidders, bidding representative institutions, and other market subjects; to share [this information] through public service platforms and credit information platforms; in order to support opening up joint punishments and for untrustworthiness and joint rewards for trustworthiness, impel procurement market subjects' credit self-management, guide the construction of a system of integrity.”

More recent analyses from Chinese experts in this field suggests that this goal is far from achieved. Writing in the journal *China Management Informationization*, a representative of a Chinese construction company emphasized how in the construction and engineering industries, the transition from a paper-based to a digital procurement process was a boon for the social credit system in quashing rampant favoritism and corruption in the bidding process. During bidding, judges score enterprises' proposals. The digitization of data from these tenders facilitates automated comparison of them to search for collusion or *weibiao* (围标, “surrounding bid,” i.e., similarities between separate bids that may have been secretly proffered by the same set of individuals or companies acting in unison), and to find forged labor contracts and social security documents.¹⁹⁵

Digitization also makes it easier to detect which companies game the process by repeatedly applying with the same project manager (in some cases, a person chosen to nominally serve the role during bidding but who ultimately has no involvement in the project); to follow through on rules barring the same person from concurrently serving as project manager on more than one project; and to flag when the same project managers and staff repeatedly win bids that could have been more evenly distributed to other entities.¹⁹⁶ Similarly, the data can in theory be used as a check on procurement panels' judges. Administrative supervisory bodies can see if a judge consistently awards high scores to a particular company or if their scores are frequently divergent from that of other judges, and they can be flagged for investigation of their relationship with the companies tendering bids.¹⁹⁷

¹⁹⁴ 张永旺 [Zhang Yongwang]. “建设工程电子招标数据应用场景分析” [Analysis of Application Scenarios for Digital Procurement Data on Construction Projects]. 《中国管理信息化》[China Management Informationization 9]. (2019): 161.

¹⁹⁵ 张永旺 [Zhang Yongwang]. “建设工程电子招标数据应用场景分析” [Analysis of Application Scenarios for Digital Procurement Data on Construction Projects]. 《中国管理信息化》[China Management Informationization 9]. (2019): 159.

¹⁹⁶ 张永旺 [Zhang Yongwang]. “建设工程电子招标数据应用场景分析” [Analysis of Application Scenarios for Digital Procurement Data on Construction Projects]. 《中国管理信息化》[China Management Informationization 9]. (2019): 159-160.

¹⁹⁷ 张永旺 [Zhang Yongwang]. “建设工程电子招标数据应用场景分析” [Analysis of Application Scenarios for Digital Procurement Data on Construction Projects]. 《中国管理信息化》[China Management Informationization 9]. (2019): 160.

Social credit-related information is now relevant to the bidding process, as people seeking bids, or “tenderers” (投标人), are prompted to check the Credit China website to ensure that they are not named on lists of judgment defaulters, companies with abnormal business operations (企业经营异常), entities with serious tax violations (重大税收违法案件当事人), and entities with serious credit violations in government procurement (政府采购严重违法失信).¹⁹⁸ If companies or senior leadership within companies are named on these lists, they can be disqualified from procurement bidding processes, a punitive measure that one Chinese legal scholar finds does not overstep the law by imposing “additional punishment for one incident” (“一事不再罚”).¹⁹⁹ Despite these inbuilt safeguards, researchers’ and expert communities’ attempts to corral and extract meaning from procurement data indicate gaps between policy and practice, and between the information the state presents and the information the public desires.

As research on OGI-driven legal activism in China has demonstrated, there are limits to how much open government information can be used for oversight and refusal of state incursions into citizens’ lives. Chinese procurement data as it is published now cannot reveal if and when projects were disbanded. Qualitative research is still a prerequisite for documenting how far procured technologies’ intended uses diverge from their ultimate on-the-ground uses.²⁰⁰

Understanding how procurement works in China, how it can double as a leveler of advantages across firms supplying the government with technology and as a check on those that break the rules, will be crucial in following not only the build-out of the social credit system but that of every major attempt the government will make to acquire technology for governing everyday life in China. With social credit in particular, the spotlight in foreign media coverage and academic analyses has for too long been trained on China’s big tech firms, neglecting the hundreds of small firms that built hyper-localized (and some national) infrastructure that interlinked different government bureaus’ databases, ran city-level pilot tests, and conducted product and policy trainings with government officials. The rest of this chapter focuses on how some of these firms, along with city government officials, attempted to translate the concept of a “credit city” into practice.

¹⁹⁸ 张永旺 [Zhang Yongwang]. “建设工程电子招标数据应用场景分析” [Analysis of Application Scenarios for Digital Procurement Data on Construction Projects]. 《中国管理信息化》[China Management Informationization 9]. (2019): 160.

¹⁹⁹ The original source was a draft of a three-part series shared at a spring 2019 social credit law conference in Beijing. 王伟 [Wang Wei]. “失信惩戒的类型化规制研究(中)” [“Regulatory Research on Typologization of Punishments for Trust-Breaking (Middle)”]. China Credit. (2019): 122.

²⁰⁰ Professors I spoke to while conducting fieldwork in China also pointed out that big tech firms are not as likely to be represented in procurement data, as they prefer to approach the government independently and hammer out agreements that avoid public scrutiny (another parallel between US and Chinese tech firms).

Deconstructing Credit Cities

Defining “Credit City”

As with its close cousin the “smart city,” the “credit city” (信用城市) became a container for shifting ideas around public and private sector data-sharing exchanges. Over annual Credit Cities Construction Summits (中国城市信用建设高峰论坛) the National Development and Reform Commission has held since 2017, the credit city concept iterated on the notion of a smart city, collating both state- and firm-held data to evaluate the trustworthiness of individuals and businesses. The evaluations in turn determined the access to and quality of services these entities could receive. Government officials have characterized credit cities as crucial to creating a “market economy with Chinese characteristics”²⁰¹ and establishing the Chinese digital economy.²⁰²

My investigation of credit cities entailed trips to four eastern coastal Chinese cities. This included interviewing representatives of firms who had participated in social credit projects through successfully securing bids in the procurement process in Suzhou; a law conference in Guangzhou where scholars provided feedback on a draft of that city’s social credit regulations; and interviewing city government officials in Fujian province’s Xiamen and Fuzhou. The Fujianese cities were of special interest because they both host scoring systems that municipal residents can access, the Jasmine Points system in Fuzhou and the Egret Points system in Xiamen. Interviews elicited how experimental and highly bounded these point systems are, among other insights on how a wide range of actors adapted what they needed from the central government’s blueprint of the social credit system while modifying local pilots to suit the unique conditions of their cities.

Urbanization and trust

Within ‘credit cities,’ I often encountered a narrative used to justify the city-centric model for social credit pilot tests: China’s rapid urbanization created a trust deficit the government was impelled to address. As a representative of the Hangzhou Municipal Information Center phrased it, “the traditional ‘acquaintance society’ is transforming into a ‘stranger society.’ Integrity provides people with a foundation of trust in exchanges and interactions—it is the most fundamental ethical force and value

²⁰¹ 章政 [Zhang Zheng]. “让信用城市成为中国特色社会主义市场经济的领跑者” [“Let the Credit City Become the Leader of the Market Economy with Chinese Characteristics”].《中国信用》[China Credit]. (2017): 112-113.

²⁰² “多方协同 共推信用城市建设” [“Multiple Parties Collaborate to Build a Credit City”]. 《中国信用》[China Credit]. (2018): 37-38.

orientation of core socialist values.”²⁰³ In Xiamen, a senior representative of that city’s Credit Big Data Innovation Research Institute framed the problem as one where people leaving rural communities where they knew their neighbors and understood who to trust were suddenly thrust into unfamiliar cities and had no sense of which individuals and businesses were reliable. While it is unclear if this view is derived of “management-oriented governance” (defined by government officials’ perceptions of citizens’ demands, rather than by direct consultation of citizens), it nonetheless pervades official arguments for technologies used to monitor and control the ‘floating population’ of migrant laborers and others who move between the countryside and cities to follow work opportunities.

As a sub-project pursued under the social credit umbrella, credit cities thus marked continuity with urban governance (城市治理) strategies used to regulate the ‘floating population,’ while pointing to how local governments might go one step further using the data they acquired. Fuzhou’s NDRC credit office representative touched upon the city’s problem of illegal group rentals, wherein too many tenants crowded into housing that collapsed and led to casualties. He related how the Fuzhou NDRC’s credit office was experimenting with using their credit data to attempt to predict which characteristics can provide an ‘early warning’ (预警) that city residents may be living in illegal group rentals. Combined with spot checks and surveys distributed through related departments of Fuzhou’s municipal government, this secondary use of credit data is one example of how municipal governments may find themselves committing a type of “mission creep” where they shift from supervising to preempting individuals’ behavior. Mission creep (also called function creep) describes when data used for one clearly defined set of purposes becomes used for new, potentially more invasive reasons often without the data subjects’ awareness. City government officials’ own perceptions of credit cities is rooted in how they formulate the problem of trust in cities beyond curbing the floating population, a formulation that is then translated into the software used to generate these “early warnings.”²⁰⁴

City governments’ use of social credit projects to tackle urban governance issues suggests they are dialing up enforcement of pre-existing regulations, and that they want to keep these issues within their remit rather than apply a one-size-fits-all, top-down national solution. In this flexible arrangement, cities are given relative autonomy to respond to issues that are salient to their local circumstances. In spite of this freedom, my interviews offered a glimpse of how some city governments are wary of exceeding legal barriers in trialing their government platforms.

Perceptions of Credit Cities

A recurring problem municipal officials raised in news media about credit cities was the “information islands” issue that plagues many other intragovernmental

²⁰³ 董宇澜 [Dong Yulan]. “将杭州打造成为国际化信用城市” [“Transforming Hangzhou Into an Internationalized Credit City”].《浙江经济》 [Zhejiang Economy]. (2016): 54-55.

²⁰⁴ Passi, Samir and S. Barocas. “Problem Formulation and Fairness.” Conference on Fairness, Accountability, and Transparency (FAT* ’19), January 29-31, 2019, Atlanta, GA, USA. <https://arxiv.org/abs/1901.02547>.

projects.²⁰⁵ In the context of credit cities, information islands refer to limited sharing of “public credit data” between government entities, as well as insufficient access to “market credit data” such as that which e-commerce companies hold. In addition to closing the distance between these information islands, government officials who took up the credit city mantle did so with at least two outcomes in mind: efficiency and legitimization of the state.

Picking up the thread of the “positive logic” of rewards, big tech firms had already successfully deployed to expand their user bases, city governments' vision of efficiency can be summed up in slogans often tied to credit city initiatives: “make data run more, let city residents run less” (让数据多跑腿, 让市民少跑路) and “enjoy first, pay later” (先享后付). The former refers to the perks attached to local points systems, e.g., a Fuzhou resident could use a high score in that city's Jasmine Points system to access “green channels,” or expedited queues for processing bureaucratic paperwork. “Enjoy first, pay later” accompanied third-party partnerships where residents' scores could be used to help them defer payments for hospital visits, among other public services. In a society where red tape and up-front payments are meaningful impediments to time-strapped people, these efficiency measures doubled as a way of showing that the state wanted to reward citizens who complied with the law.

At the 2018 Credit Cities Summit, the deputy mayor of Suzhou commented that “allowing trustworthy city residents to feel the value that credit brings, allowing trustworthy businesses to feel that business development has promise—this is the responsibility of government departments.”²⁰⁶ This hope for improved public *feelings* about government's efficacy might not have the immediate pay-off that officials anticipate, as a survey of over 100 mayors and city managers at one of the credit cities forums revealed 81% of them believed it would take another 10 years to fully implement credit cities.²⁰⁷ Although one study of fifty city-level social credit policies described them as “mandatory... government-led SCS [social credit systems],” my interviewees' rough estimates of percentages of people using city scoring apps suggested that most people in these cities were not availing themselves of these local systems.²⁰⁸ One 2019 estimate counted only 5% of Xiamen's population as users of the city's Egret Points system.²⁰⁹ Another survey focusing on the public's opinion of credit cities hinted at misalignment between the value the state saw these projects producing and that which people experienced.

A public opinion survey that the magazine *Xiaokang* administered with Tsinghua University in 2016 showed that less than a third of respondents supported many of the

²⁰⁵ Chen, Huirong and S.C. Greitens. “Information capacity and social order: The local politics of information integration in China.” *Governance* 35, no. 2. (2022).

²⁰⁶ “多方协同 共推信用城市建设” [“Multiple Parties Collaborate to Build a Credit City”]. 《中国信用》[China Credit]. (2018).

²⁰⁷ “热议信用城市，助推城市信用建设提速” [Credit Cities a Hot Topic in Promoting the Construction of Urban Credit].《金融电子化》[Computerization of Finance]. (2017): 111.

²⁰⁸ Liang, Fan, and Yuchen Chen. “The making of ‘good’ citizens: China's Social Credit Systems and infrastructures of social quantification.” *Policy Internet* 14, no. 1. (2022): 115.

²⁰⁹ Zhang, Chenchen. “Governing (through) trustworthiness: technologies of power and subjectification in China's social credit system.” *Critical Asian Studies* 52, vol. 4. (2020): 581.

core blacklisting, red listing, punishment, public shaming, and information sharing mechanisms that have come to define the social credit system.²¹⁰ A mere 33.8% of respondents believed that regular publication of black- and red lists were needed to establish credit cities, with an even slimmer 31.5% in favor of individuals and companies being severely punished for untrustworthy behavior. In addition, 26.5% supported exposure of untrustworthy behavior through online platforms. Meanwhile, 55.5% of respondents thought “rewards for trustworthy behavior and joint punishments for untrustworthy behavior should be undertaken in credit cities.” Lack of follow-up survey data leaves unresolved the question of whether more interaction with these features of the system made people more or less supportive of them. The 2016 data also pointed to a gap between the gains municipal government officials thought credit cities could achieve for themselves and their cities’ residents, and the reality of these systems for ordinary citizens whose behavior credit cities platforms tried to shape.

Much like with other social credit initiatives, credit cities walked a fine line between offering new rewards and punishments as behavioral nudges, while taking care not to overstep the bounds of the law. In contrast to “smart cities” projects that focused on collecting new data on citizens’ activities, credit cities rely on repurposed data that local governments, and to a lesser extent companies, already possess. To further minimize local government overreach, the NDRC also emphasized in 2019 that scores within these cities could only be used to incentivize ‘trustworthy’ behavior, and not to penalize ‘untrustworthy’ actions.²¹¹

Fuzhou and Xiamen’s scoring systems issued scores that citizens could check via dedicated apps that would link to perks they could unlock, such as deposit-free rentals of hotel rooms, apartments, offices, and bicycles. Scores were primarily calculated using “public credit information” local governments already held on citizens, e.g., being named on a judgment defaulter blacklist could be cause for docking points.²¹² This avoided meting out redoubled punishments for people who already faced the censure of being blacklisted, so that blacklisters were instead simply not able to access the benefits of having high scores within their cities’ systems. Rewards schemes also dipped into pre-collected data sources, such as in initiatives like Guangdong’s “Volunteer Trustworthy Joint Incentive Plan.” Guangdong’s information management system for volunteers who are officially registered with the government shared records with over fifty organizations who provided discounts on fuel, tickets to tourist attractions, and advantages in hiring processes, among other rewards managed through the “Come on Guangdong” (加油广东) app.²¹³

²¹⁰ 刘源隆 [Liu Yuanlong]. “创建信用城市,谁是最大‘赢家’?” [“In Establishing Credit Cities, Who is the Biggest ‘Winner’?”].《小康》[Xiaokang 22] (2016): 74-77.

²¹¹ Zhang, Chenchun. “Governing (through) trustworthiness: technologies of power and subjectification in China’s social credit system.” *Critical Asian Studies* 52, vol. 4. (2020): 581.

²¹² Other scholars who have closely examined city-level scoring systems have also found consistency in the principle of using pre-existing government-held data exclusively. Liang, Fan, and Yuchen Chen. “The making of ‘good’ citizens: China’s Social Credit Systems and infrastructures of social quantification.” *Policy Internet* 14, no. 1. (2022): 120.

²¹³ “广东星级志愿者可享受加油和购物优惠” [“Starred Volunteers Can Enjoy Refueling and Shopping Benefits in Guangdong”].《中国城市信用》[China City Credit]. October 7, 2018.

Influences and Competition

Although credit cities organically developed pilot tests suited to their particular needs, interviews demonstrated how local governments, along with the big data research centers and small companies they partnered with, took cues from both big tech companies and other cities in designing their scoring and rewards systems. A Fuzhou NDRC representative I spoke to pointed to Jiangsu province and the city of Yiwu (Zhejiang) as two localities that were earlier to implement credit scoring, and as referents Fuzhou looked to in designing Jasmine Points. In making comparisons with forerunner cities like Shanghai, the Fuzhou NDRC credit office saw Fuzhou as being stronger at applications of its credit data in everyday life compared with Shanghai, which he saw as stronger at infrastructural work such as imposing transportation restrictions on people with poor credit statuses. My interviewee who helped design and implement Xiamen's Egret Points system echoed this perspective. He observed that though Shanghai's "Honest Shanghai [program] is technologically advanced, it does not have many application scenarios." He noted that Xiamen's relatively small population of 4 million residents made it easier to experiment with an application-driven model. These comparisons have unsurprisingly fed into competition between credit cities.

Central government categorization and ranking of cities is not novel in China, with other competitions running in parallel to those between credit cities. Categories such as "National Civilized City," "National Water-Saving City," and "National Health City" are evaluated every few years.²¹⁴ These competitions correlate with the promotion of local officials in these cities, which raises a question for future research of whether high-ranking credit cities also influence municipal officials' promotions. Credit cities are instead evaluated annually, with the China Economic Information Network (中国经济网) running a credit city status monitoring system that purportedly uses big data to assign scores to and rank credit cities.²¹⁵ Researcher Adam Knight documented how in 2016, a think tank and two Chinese universities developed their own point system for evaluating cities' implementation progress. Slightly higher point values were awarded for factors like having web portals citizens could use to access their local credit information, and for cities that facilitated information sharing between multiple government departments. Tellingly, factors that could hold governments more

²¹⁴ Li, Ding, H. Xiao, J. Ding, and S. Ma. "Impact of performance contest on local transformation and development in China: Empirical study of the National Civilized City program." *Growth and Change* 53. (2021).

²¹⁵ 薛东阳 [Xue Dongyang]. "首届中国社会信用体系建设论坛在京举办——中诚信和神州数码联合推进'信用城市'落地" ["Inaugural China Social Credit System Construction Forum Held in Beijing—China Integrity and Shenzhou Digital Jointly Promote 'Credit City' Implementation"].《产权导刊》 [Property Rights Guide 6]. (2016): 22-23.

accountable such as incidents of “lost trust” in local government and errors in data entry of public credit information, each only lose one-tenth of a point.²¹⁶

Both in my Xiamen and Fuzhou interviews, it became clear that all of these stakeholders closely follow the official rankings of credit cities. The representative for Fuzhou’s big data committee pulled up the NDRC’s China Finance website (中金网) on his phone, boasting that prior to the introduction of Jasmine Points, Fuzhou ranked 23rd among 36 provincial and sub-provincial (副省级) cities across China, whereas it had risen to 6th place by the time of the interview in spring 2019. Yet the rankings mark another missed opportunity for service-oriented governance. Factors including the number of city residents actively using the benefits of these cities’ scoring systems and web portals, or surveys to understand benefits or subsidies citizens might want from their cities could help shift credit cities away from a performative, low-engagement form of governance. Scoring systems contribute further to the performativity of credit cities, given their relative powerlessness to incentivize behavioral changes. While city governments competed in the annual rankings, many of them exhibited restraint in the design and implementation of these experimental scoring systems.

Scoring Systems and Credit Cities

Within social credit pilots, a city scoring system could be understood as a form of experimentation under hierarchy, an adjustable measure that can gather feedback about citizens and itself be tweaked to adapt to a city government’s shifting objectives. According to the credit firm representative in Suzhou, the differences between scoring systems from one city to another arose because “at the national level, there aren’t [guiding] documents... each place synthesizes its own situation, then explores further, producing a variety of means of evaluation.”

One of the cities that has been most heavily researched and written about in English is Rongcheng (Shandong), which may also have attracted this level of foreign attention because it is often deemed a model for social credit pilots—a professor I worked with noted that it is a common site visit on political education “study tours” that university students attend. Rongcheng has at times been mistaken as representative of most cities in China, when it is instead a reminder of how variable and bespoke local implementations of scoring systems can be.²¹⁷ Rongcheng’s low-tech approach to data collection and keen focus on its local industries as well as interpersonal conflicts between neighbors is unscalable and incommensurate with the conditions of larger cities. Yet aside from these differences, there is uniformity in the “positive logic” that pervades credit cities.

²¹⁶ Knight, Adam. “Technologies of Risk and Discipline in China’s Social Credit System.” Chap. 9 In *Law and the Party in China: Ideology and Organisation*, edited by Rogier J. E. H. Creemers and Susan Trevaskes, p. 251. Cambridge, Cambridgeshire: Cambridge University Press, 2020.

²¹⁷ For example, Knight points out how as a medium-sized city, Rongcheng is able to focus on its taxi and kelp production industries by creating point values specific to drivers and boats. Knight, Adam. “Technologies of Risk and Discipline in China’s Social Credit System.” Chap. 9 In *Law and the Party in China: Ideology and Organisation*, edited by Rogier J. E. H. Creemers and Susan Trevaskes, p. 253. Cambridge, Cambridgeshire: Cambridge University Press, 2020.

In all three cities where I conducted group interviews with city government officials, big data research centers, and small tech firm representatives, interviewees stressed the guiding logic of scores as positive, rather than punitive. A member of Fuzhou's municipal big data committee noted that "the application of credit scoring can only provide positive incentives to citizens, and cannot be used as a basis for punishment... because punishment would limit a citizen's legitimate rights and interests." The Suzhou credit firm employee went a step further in stating that "credit scores are used to provide positive incentives... everyone's starting point at this time is to find the shining points (闪光点) in everyone, which can then play a role in regulating public order and good customs in society." In theory, this could counterbalance the fears that scoring systems will be used to micromanage behavior. Combined with constraints on the kinds of data local governments can use in scoring, this suggests scoring systems may be relatively weak influences on behavior.

Both Xiamen and Fuzhou representatives emphasized that their scoring system trials only relied on public credit information, rather than market credit information—a seemingly bureaucratic distinction that emphasizes hard limits on how invasive these scoring systems can be in China. The NDRC member in Fuzhou identified public credit information as that which "we must first ensure comes from the government's statutory credit information (法定信用信息)." He raised examples of how some types of information they use straddle both categories, such as information on property ownership or whether city residents are behind on payments for public utilities such as water, electricity, and telecommunications services. The emphasis across both the Fuzhou and Xiamen interviews was that these constituted information the local governments could verify, unlike market credit information such as user data from major companies like Alibaba. The Fuzhou NDRC credit office representative made a direct comparison between his city's Jasmine Points program and Ant Financial's Sesame Credit, pointing out that the latter relies primarily on financial transaction data (market credit data), in marked contrast to Fuzhou's dependence on government data (public credit data) alone. This distinction is one of many forms of governmental restraint that are crucial for understanding the disconnect between the social credit system in practice versus in the popular overseas imaginary of it.

Credit City Limits

Interviewees from both "credit cities" exhibited restraint in their reminders of how unsettled the then-current state of social credit experimentation was. They raised caveats regarding their own expertise and whether or not they felt their executions of local pilot tests aligned with central government expectations or policy visions. As the Xiamen Big Data Innovation Research Center representative put it, "my understanding as a credit worker is not necessarily correct." Fuzhou's NDRC member likewise cited policy and academic experts in framing how his city conducted their own pilot, pointing out that "whether in academic circles or at the work level, consensus has not yet formed... so we should be very cautious in advancing this work." Government and market actors are simultaneously responsible for implementing central government social credit policy while trialing new systems whose results inform drafting of local

social credit regulations. This careful triangulation also affects how credit cities' implementers think about restraint with regard to punishments for administrative law violations.

The gap between rhetoric and action is least accounted for in perhaps the most consequential function of local social credit pilot tests: punishments for so-called "trust-breakers." All three Fuzhou interviewees emphasized the importance of local governments not overstepping their authority in punishing companies or individuals, both to preserve these entities' rights and to avert the (illegal) redoubling of punitive measures already taken against these "trust-breakers." While the question of double punishment here seems to be contingent on poor information exchange between government agencies, the Fuzhou NDRC member also indicated a need for more clarity in local policy, suggesting that "from a legal point of view, this boundary is not too clear. We think that our part may need to be strictly controlled." Despite these hesitations and signs that the "information islands" problem still loomed over local government initiatives, my interviewees seemed optimistic about other possibilities for interoperability between the systems that they developed and those of other cities.

Potential for interoperability

Credit cities experts found it natural for different cities to have diverse scoring methods, while also holding out hope that in the future, residents of one city might be able to port their scores over to another and receive in-kind benefits. This openness to multiple interpretations of social credit aligns with findings from the literature on experimentation under hierarchy and policy feedback loops in China. One of the biggest barriers to this interoperability, however, is the discrepancy in terms of development and resources between different regions of China. Professor Dai Xin touched upon this in early research on the social credit system, noting that the concentration of funding and state resources along China's east coast also paralleled how far along social credit pilot experimentation and policy initiatives were located there, in comparison with the less-resourced expanses of Western China.²¹⁸

Building upon a Peking University economist and social credit policy advisor's prediction that social credit developments would not converge towards the creation of a single national score, the NDRC representative working on Fuzhou's Jasmine Points was enthusiastic instead about the possibility that one day the scores from Fuzhou could be interoperable within other cities in Fujian province, such as Xiamen's Jasmine Points. This contrasted with the Xiamen big data research center interviewee's opinion that "there should be a unified national basic score... [that] would be consistent across the country, but I think the application in local areas would still be differentiated." Comparing such an approach to FICO, where he argued most people had an idea of what assumptions about creditworthiness to associate with different FICO score ranges,

²¹⁸ This distribution of where city level pilot tests tend to be more developed still holds as of 2022. Liang, Fan, and Yuchen Chen. "The making of 'good' citizens: China's Social Credit Systems and infrastructures of social quantification." *Policy Internet* 14, no. 1. (2022): 119; Dai, Xin. "Toward a Reputation State: The Social Credit System Project of China." (2018). https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3193577.

he felt working toward a unified national score that still took cities' particular goals, preferences, and problems into account could clarify confusion about discrepancies between different cities' pilot tests.

The individuals involved in credit cities who I spoke to about where they thought local pilots could improve echoed one another's comments about a sense of China "lagging behind." The big data research institute representative in Xiamen noted that the city struggled with questions around data collection—standards of which data were required, how granular they should be, the completeness of datasets—and data sharing between state entities. Absent legislation addressing these issues and questions of how the data can be used, he opined, companies and local governments felt constrained. City governments' resource levels also influence the potential inter-communicability of these localized systems. The Suzhou credit company's representative explained that "the deeply layered problem" of these differences between city governments were a roadblock to having, for instance, one's score within Suzhou's local system carry over when visiting or even moving to Xiamen. An additional obstacle is that cities tend to collect slightly different data from one another. Yet the Suzhou credit company representative believed that Credit China would have to be the point of convergence for cities' locally collected data to "unite" them. Even while expressing frustrations with their limitations, another fear that arose was one of what could happen if these systems were granted too much authority.

The Suzhou firm's representative cautioned that if left unchecked, over-reliance on these open-ended credit assessments could one day create "lazy government (懒政府), a kind of excuse for shirking responsibility. [This type of lazy government] will not manage many of its problems itself... and then push [responsibility] onto credit. But it can't be said that all problems can be summarized as social credit problems." His characterization of "lazy government" due to over-dependence on automated means of singling out and punishing transgressive behavior is in part reminiscent of long-standing concerns around the world about automation bias. Automation bias occurs when someone defers to a recommendation or decision a machine makes, often because they believe the machine's expertise is superior to their own. Without access to the numerous bureaucrats who access the various datasets, web portals, and software I describe throughout this chapter, I had no way of knowing if automation bias, or similar phenomena such as "anchoring" were already becoming common in the social system's implementation. Social credit is not the only tech governance domain in China where this is a potentially worrying outcome, though it might be harder to detect given the lack of transparency around how cities handle issues such as requests for credit repair.²¹⁹

As of this writing, a unified national score does not exist. The range of opinions about whether or not such a consolidation was necessary reflects how internal debates about the future of social credit worked against it becoming the unchecked dispenser of omnipotent moral judgements its biggest critics fear. This was not the only core assumption about social credit and scores my fieldwork deflated. What little information I could glean about big tech firms' participation in these initiatives further

²¹⁹ Stern, Rachel E., M. Roberts, B.L. Liebman, A. Wang. "Automating Fairness? Artificial Intelligence in the Chinese Courts." *Columbia Journal of Transnational Law* 59. (2021): 527.

illustrated how, as in Chapter 2, they tended to limit their involvement via bounded partnerships that drew minimal public attention.

Big Tech Limits Its Involvement in Credit Cities

In addition to big tech firms' participation in social credit projects through cooperation with the courts (Chapter 1) and modifications to their platforms (Chapter 2), a handful made the foray into credit cities experiments. The fintech arm of Alibaba's e-commerce rival JD.com, JD Finance, announced its "smart city credit platform" at the 2018 China Credit City Construction Forum in Fuzhou.²²⁰ One neighborhood in Fuzhou tested out a model where residents with high Jasmine Points scores could access perks through JD Finance, such as deposit-free umbrella rentals or discounts at JD's experimental cashier-less supermarket.²²¹ Government officials also referred to some big tech firms' service tie-ins with cities as participation in credit cities, such as Lian Weiliang of the NDRC commenting on how high-scoring Sesame Credit users in Hangzhou could ride buses and pay later under an agreement between that city's transport system and Ant Financial.²²²

The same issue arose in the Ant Financial interview I describe in more depth in Chapter 2. At the time of the interview, I was only aware of Ant Financial's partnership with the city government of Suzhou in supporting the creation of a municipal social credit system that included a scoring platform. When I raised this publicly documented cooperation with Ant's PR representatives, the lead respondent in the group said that the news coverage over-represented the company's level of involvement with Suzhou's pilot project. His sense of the situation was that the Suzhou government did not quite know how to pursue this undertaking and was turning to Ant Financial to describe Sesame Credit to them in depth, as an example they could emulate. He was aware that the company had given presentations about the five dimensions of Sesame Credit scores to local governments. I cited news reportage linking Ant Financial to similar efforts in Hangzhou, where the company is headquartered, and a few of the PR representatives commented that the local city government-run Credit Hangzhou (信用杭州) platform has consulted with Ant Financial and asked for statistics on how many Hangzhou residents use deposit waivers in order to use this data as a form of PR for the city to advertise itself as tech-savvy and providing convince to residents. This again follows the pattern of big tech firms sharing aggregated data, and drawing a distinction between active versus passive participation in social credit system construction.

²²⁰ “他是对标芝麻信用和腾讯征信的‘中外混血富二代ZRobot CEO’ [“He's the ‘Chinese-Foreign Mixed-Blood Second-Generation’ ZRobot CEO Taking on Sesame Credit and Tencent Credit”]. August 2, 2018. Sohu. https://www.sohu.com/a/244725110_400678.

²²¹ “京东金融打造智能城市信用平台用AI和大数据服务城市信用” [“JD Finance Establishes Smart City Credit Platform, Uses AI and Big Data to Serve Credit City”].《证券时报》[Securities Times]. 2018. <http://baijiahao.baidu.com/s?id=1603207392402141026>.

²²² “让更多信用城市撑起更高水平的信用中国” [“Let Even More Credit Cities Support Higher Levels of Credit China”]. Credit China. August 23, 2018. https://www.creditchina.gov.cn/xinyongkanwu/xiliebaodao/xileibaodao1/wenzhangliebiao1/wendanliebiao/201808/t20180823_124249.html.

A sharp contrast from this perspective arose in my interview with an economics professor who has advised the NDRC on development of the social credit system for many years. When discussing how Ant Financial partnered with cities in Sichuan province, he described these types of city partnerships as serving the company primarily, rather than the municipal officials. From his perspective, Ant was the main beneficiary because it would now have access to government-held data that it needed for its business operations. Both the JD.com and Ant Financial examples described amounted to marketing for these two companies at most, rather than a direct hand in shaping scoring systems or sharing sensitive user data. The information exchange was likely to move in the opposite direction of what might be expected: JD now had data to gauge user responses to its unmanned supermarket, while Ant Financial could assess how popular the pay-later model was for public transport. The representative of the small credit company in Suzhou also revealed how members of this type of enterprise see themselves in comparison to Chinese big tech firms. Small and medium enterprises like this firm in Suzhou may have seen Ant Financial as a competitor: Sesame Credit also evaluates SMEs' creditworthiness and provides them with Sesame Credit scores that third party credit institutions may consult. Yet the Suzhou firm's representative opined that Ant Financial lacked the public credit information (公共信用信息) necessary to make so-called "comprehensive evaluations." These observations underscored findings from Chapter 2, where I illustrate how major tech companies agree to partnerships with the state when access to government data is beneficial to these firms' pre-established goals.

Shifting focus to sharing economy companies including Didi Chuxing and Alibaba's e-commerce and fintech rival JD.com, he talked about companies' efforts to interconnect their pre-existing membership and scoring systems with city-level social credit pilots as a way to publicize these features and attract new customers. To his understanding, ride-hailing firm Didi Chuxing had allowed Suzhou residents with high scores in the city government's Chrysanthemum Points scoring system to convert these into Didi's Black Gold membership category and access discounts, subsidies, and better service when booking cars. He claimed this "joint model consideration" between city governments and tech companies extended to home and office rental services from programs such as JD.com's "Jing Xiao Zu" (京小租) and Guangdong province's Zu Ji (租机).

Two lessons emerge from a closer look at the somewhat over-hyped and under-documented relationship between big tech firms and local governments tasked with implementing social credit on the ground. The first concerns how tech companies' formerly "off-label uses" of their credit-like assessments—discounts, waivers, and pay-later schemes—can ultimately become features that local governments themselves study and seek to emulate. The Fuzhou representatives working on the city's scoring system pointed out that one of the main impediments was lack of state funding to subsidize as many and as varied a set of reward incentives as big tech firms like Ant Financial could. The question of when and how governments choose to copy tech companies' practices demands further exploration in China, rather than deferring to prior social credit research's treatment of tech firms as fully beholden to or indistinguishable from the state.

The second, related lesson is yet another reminder that the idea of “data pools,” or an arrangement where the state has unfettered access to private sector data, is misleading. Both in Fuzhou and Xiamen, officials described being unable to incorporate data from firms like Alibaba into their experimental scoring systems because they could not validate the data. Likewise, interviewees suggested tech firms had something to gain from being granted access to state-held data. The conditions under which decisions to share data in either of these directions are made similarly merit closer study in China.

The remainder of this chapter shifts focus to the small tech companies who observed and were sometimes asked to help local governments emulate these features of big tech companies. The wide range of responsibilities and services these small firms provided were aimed at responding to areas of the social credit system where structured uncertainty created demand for information, trainings, and analytical tools.

More than Matchmakers: Perspectives from a Small Firm in the Market for Social Credit Infrastructure

Although I interviewed three small and medium enterprises (SMEs) who provided software to and advised the cities of Hangzhou, Guiyang, and Suzhou respectively, in this chapter I focus solely on the richest of these interviews, with the Suzhou company.²²³ It was also useful to understand how governmental and quasi-government organizations saw these firms. The Xiamen big data research institute representative underscored that the procurement process was open and transparent to the public, emphasizing “we will not just go and cooperate with JD.” Moreover, he remarked that “this is not high-end technology. It’s not only Alibaba and JD who can do it.” In his estimate, the market for procuring the components of the broader system was competitive precisely because it required less sophistication and lower R&D costs than did the more complex technologies that big tech firms are best positioned to produce. This combined with the relatively low amounts of money tied to bids for tender the local governments issue, ensures procurement remains the small firm’s domain when it comes to social credit. Small firms are also suited to navigating this evolving field because of their willingness to act as intermediaries.

In Suzhou, a master’s student and I visited a small company whose main business included automated credit evaluations of other SMEs as well as consulting and providing training to local governments on their social credit pilots. The representative from this firm who we interviewed was also one of the original founders of an influential WeChat public account, Yuandian Credit, a go-to source for news and analyses about developments in the social credit system described earlier in this chapter. He provided the perspective of a small company both attempting to advise the government on how to build out and implement the social credit system at the same

²²³ The Hangzhou firm was cautious about sharing information and did not allow me to record the interview, which mainly covered information about them that was publicly available. The Guiyang company spoke to me and the professor who arranged the interview primarily concerning their work in the countryside, where they experimented with ways to collect and share data about farmers to promote social credit-related goals of integrity and accountability in food production. Given the rural focus of their work, I have excluded them from this analysis.

time that his co-workers were themselves researching and contributing to a collective knowledge base about social credit's changing legal and political landscape.

The Suzhou company's business model involves gathering data on SMEs and evaluating these enterprises for factors including timely repayment of loans as well as rate and timeliness of contract fulfillment. To facilitate SMEs' ability to contract with other firms who look them up in public credit databases, the Suzhou credit company reports their overall assessments of the SMEs to third party credit service institutions "so that big companies can conduct this kind of management in their supply chains, and their supply chains can become a closed loop." At the time, his company was experimenting with using machine learning to provide SMEs with credit scores. Yet as the representative indicated, because they were unable to explain how they arrived at certain results, "if later we can actually explain clearly what its logic is during the measurement process, why it outputs these kinds of things, then we can use it. But right now we still aren't operating this piece." This was the one instance where algorithmic explainability, a topic of growing interest in AI research both in and outside of China, came up in my interviews. This particular comment demonstrated that even small companies in China—without participating in emerging expert debates on AI explainability in the country—are nonetheless concerned with being able to understand and explain their credit evaluations before applying certain models to their clients' data.

The other component of the Suzhou company's business model encompasses services they provide for local governments' social credit implementations. The company conducts research on other social credit pilots' standards and rules to present findings back to their local government clients, looking at qualities such as feasibility and, in an echo of the Didi Chuxing representative from Chapter 2, "scientificness" of other localities' social credit policies. In researching recommendations for what he referred to as "legislation pilot tests," firms like his influenced both the technical and the policy aspects of social credit implementations. He went on to describe how these companies occupied a unique position as promoters and "matchmakers" (撮合) bringing local governments and bigger Chinese tech firms together to form "reputation-plus alliances" (信誉+联盟). His understanding of the state's interests is one where

"market resources, including providing incentives for the populace, are perhaps easier to go and do because they avoid... this type of government finance capital support problem [财政资金的支出问题]. If [a city] relies on the government... it will incur public costs and public funded-budgets to push it forward. There may be some problems when it is executed in various places. If [one] relies on market institutions to initiate [these efforts], this is a process that benefits multiple parties, and everyone can then be willing to do this. On the contrary, I think this is a long-term mechanism, right? [It] will be more valuable than totally relying on the government to do it unilaterally."

This argument for the market-driven model of financing and implementing credit city technology and services encapsulates the state-firm ties that are necessary for the social credit system, or any similar policy project, to function on both a national and local level. The organizational structure of credit cities also revealed how quasi-governmental

institutions interacted with governmental and private sector ones to offer funding and research support.²²⁴

On the other side of this exchange between state, quasi-government, and industry organizations, the hundreds of small firms who win bids to build the hardware and software that holds the social credit system together also provide auxiliary services that guide pilot tests and the systems that remain in place afterwards after they conclude. Noting that local NDRCs are largely responsible for promoting social credit pilots, the Suzhou representative mentioned that his company also conducts training (培训) sessions. Credit repair was one area in which they received high demand for training government officials, which he attributed in part to the proliferation of newly issued administrative punishments. In his view, credit repair was critical to the functioning of the social credit system because rather than “driving people out of society” and dealing with the resulting social upheaval, it endows people with a “credit consciousness” that keeps them from repeating the same offenses. He saw credit repair mechanisms as among the least-developed areas of the social credit system, with “few concrete guiding documents” on this matter having been issued at the time.²²⁵ When it comes to social credit, this combination of both a surfeit of new policy developments in some areas and lack of guidance in others kept small firms relevant and in-demand at the early phase of the system’s development that I studied.

Conclusion: Credit Cities as Vanity Projects

National government officials’ perspectives on where the social credit system could improve somewhat departed from the local government and industry view. A conference I attended at Sun Yat-Sen University in Guangzhou in January 2018, “National Governance and Credit Legislation,” drew from a variety of government, industry, and academic experts’ presentations to inform Guangzhou’s own draft of municipal credit regulations. A member of the National Commercial Credit Research Center presented at this conference, identifying concerns such as “information abuse,” low levels of trust (守信), poor rights protection around the sale of personal credit

²²⁴ Xiamen’s big data research institute, for instance, acted as a liaison between the Xiamen government and the small companies contracted to build social credit’s technological infrastructure in that city, and its staff conducted research on the collection, cleaning, processing, and applications of “credit big data.” Their representative also noted the institute provides “investment incubation” by issuing capital support through initiatives such as their “industry guidance fund.” Likewise, they have input into the government procurement process.

²²⁵ The multitude of both local and national administrative punishments being released kept this company busy reading new administrative punishment credit repair documents and fielding client inquiries about compliance. This required following developments in each locality where the company conducted trainings—sometimes within the same province, differences in governance models, such as the expanded jurisdiction of cities deemed autonomous zones (自治区), came with minute yet meaningful differences in the scope of administrative authority checklists (行政权利清单) and responsibility checklists (责任清单) that steer local government activity in this area. Within a province, divergent definitions of separate local government departments’ rights and responsibilities make it difficult to determine how credit repair should ultimately be carried out.

information, weak regulations on blacklisting as well as punishment and rewards (惩戒), and uneven development between different sectors (e.g., infrastructure supporting public credit evaluations was developing faster than that for commercial credit) as stumbling blocks to achieving the state's vision for the social credit system.

This last point in particular should be explored in future research probing whether and how the state attempts to strike a balance in assessing the four target groups of the social credit system. Point systems comparing cities to one another only serve an evaluative function that makes these cities legible to the central government, rather than to serve as an accountability check on them. Research focusing on how the social credit system has been applied to legal institutions and government could further contribute to understanding if performative governance extends to this potentially more meaningful avenue for building institutional trust and transparency.

Credit city developments were relatively toothless during the period when I conducted my fieldwork. Based on interviews and publicly available information, many seemed unconnected to surveillance camera networks and other troubling tech used for policing. At the same time, fears that human rights experts outside of China have raised about points systems being used to punish citizens for lawful expressions of frustration with the state are justified. Rongcheng docks points for activities related to petitioning (信访), a mode of expressing dissatisfaction with the government, and Rongcheng is also one of at least five cities to deduct points for spreading misinformation on WeChat and other social media.²²⁶ There is potential for authorities to deem political opinions as well as accurate information that is unfavorable to the state as misinformation that citizens can then lose points over, although it remains to be seen if people sufficiently care about their scores that their political behavior might change to preempt low scores. At the same time, the beginnings of potential "function creep" were on display and received minimal domestic attention or criticism. This chapter's example of how data on illegal rental housing could be used to make predictions of where people over-crowd apartment buildings fits a type of "social good" narrative, obscuring the potential harms that might come with making and acting on such predictions.

Many questions remain unanswered about credit cities. Did these partnerships create lock-in, or were procurement processes designed to prevent these types of state-firm relationships? Did data these firms generated in partnership with the state become proprietary for the firms?²²⁷ Recent interest in tech procurement in the United States and increasingly in countries that import surveillance technology from China has drawn attention to policymakers' lack of knowledge about how data produced within these systems can be used, and governmental naïveté about if and how contracts can be terminated and user data deleted if a state-firm partnership ends. Credit cities were

²²⁶ Liang, Fan, and Yuchen Chen. "The making of 'good' citizens: China's Social Credit Systems and infrastructures of social quantification." *Policy Internet* 14, no. 1. (2022): 122.

²²⁷ For one example of how data are "translated" between government records and the company responsible for the rating model can be seen in the Honest Shanghai app. The Software User Agreement within the Honest Shanghai app that stems from Shanghai's local social credit pilot test makes clear that different entities are responsible for data collection (Shanghai Municipal Public Credit Service Center), the app's evaluative model (Fang Sheng Credit Evaluation Co, Ltd.), and running the app itself (Shanghai Electronic Certificate Authority Center Co., Ltd.)

merely one of many iterations of early policy experimenting in the social credit system. The shelf life of this concept is likely to be short if citizens' buy-in remained as tepid as it was during my fieldwork. Yet science and technology studies has demonstrated on numerous occasions how a project that appears novel at the outset can easily fade into simply becoming taken-for-granted infrastructure, which could be an alternative route for credit cities. Their integration of public and private sector data, seen as unique in 2016-19, could be completely unremarkable in the not-so-distant future.

Chapter 5

Conclusions

This dissertation challenges prevailing assumptions that China's social credit system is a top-down, comprehensive state surveillance apparatus through which Chinese tech firms take direct orders from the central government, issuing scores to shape citizens' behavior. Drawing on the framing of "structured uncertainty" to explain both the multiplicity of competing directives and ill-defined contours of the social credit system that the state laid out, I show how a variety of tech companies interpreted and acted on the state's expectations that they would contribute their platforms, expertise, and data to this tech governance project.

I identify major Chinese tech firms as 'credit norm producers' who strategically complied with ill-defined state demands. The "positive logic" of their reward mechanisms for their users created a paradigm the National Development and Reform Commission sought to emulate in recruiting some of these same companies to offer citizens rewards for 'trustworthy' actions. Smaller tech firms who enter the social credit market through the procurement process are 'intermediaries,' and benefit from structured uncertainty. In addition to supplying local governments with hardware and software, these smaller firms research and translate new social credit policy developments for the provincial and municipal governments they contract with, spinning their analyses into auxiliary services such as training sessions and consultations for drafting new regulations. Understanding how these two broadly defined types of technology firms interacted with the government to transform blueprints for tech governance projects into reality can potentially yield useful approaches to future research on similar projects, such as studying China's "smart courts," digital health codes, and educational technology market.

Pulling back from the company-level view to assess the total effect of these state-firm collaborations, I argue that the social credit system has amounted to performative governance at best. Although it started out as an ambitious project to shape individual behavior to accord with a state-derived model of 'trustworthiness,' over years of implementation the social credit system has come to resemble Ding's conception of "management-oriented governance." The state's efforts to re-define and impose concepts of 'trustworthiness' in ways that only sought to bolster state legitimacy—rather than soliciting citizens' ideas about how to build societal trust—has

thus far led to unremarkable outcomes. Courts still face high turnover of judgment defaulters, despite their partnerships with tech firms to evaluate and digitally shame people who land on blacklists for violating administrative law. City scoring systems, for all of the hype they have attracted globally, are largely under-utilized and ignored.²²⁸ Nevertheless, technological solutions to a host of social problems in China still proliferate. Findings from the social credit system's roll-out may provide insights into the development of these new projects.

The long shadow of social credit myths

Multiple efforts from scholars and media outlets to disprove previous myths about the social credit system have been somewhat successful, yet the ways in which they fail to fully snuff out misperceptions are reflected in as varied a set of outlets as Sinophobic vandalism and tech policy. In the midst of a broader national wave of anti-Asian racism, a pharmacy in Santa Cruz, California was graffitied with the message, "Vaccine passports are a social credit system. Welcome to China, comrade #ChinaVirus and #ElectionInfection."²²⁹ Over time, a trend I have loosely observed is that foreign media tend to invoke the specter of social credit for fearmongering about China's global influence or contact tracing in the Covid-19 pandemic. The half-life of the image of social credit as a panoptic authoritarian arbiter of morality is longer than expected when it is wrapped up in anti-China rhetoric that has percolated throughout US politics. Yet even outside of the United States and among presumably better-informed parties, the imaginary of social credit has influenced policy proposals to prevent the types of egregious harms the system's few scoring experiments have ultimately not caused to transpire.

The European Commission's proposed EU AI Act "prohibits AI-based social scoring for general purposes done by public authorities."²³⁰ Specifically going on to elaborate that "Such AI systems evaluate or classify the trustworthiness of natural persons based on their social behaviour in multiple contexts or known or predicted personal or personality characteristics," these suggested rules do not prevent private companies from similar types of scoring. Their focus on governments as scorers and on assessments of trustworthiness in particular appear to draw directly from years of inaccurate coverage of the social credit system. Unlike the above example of how

²²⁸ "China's Most Advanced Big Brother Experiment Is a Bureaucratic Mess." Bloomberg. June 18, 2019.

<https://www.bloomberg.com/news/features/2019-06-18/china-social-credit-rating-flaws-seen-in-suzhou-osmanthus-program>.

²²⁹ Hartman, Melissa. "Troubling anti-Asian acts reported across Santa Cruz County this week." East Bay Times. April 22, 2021.

<https://www.eastbaytimes.com/2021/04/22/troubling-anti-asian-acts-reported-across-santa-cruz-county-this-week/>.

²³⁰ Proposal for a Regulation of the European Parliament and of the Council Laying Down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act) and Amending Certain Union Legislative Acts. EUR-Lex.

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021PC0206>.

misconceptions of social credit can fuel xenophobic sentiment, the language around social scoring in the EU AI Act is not likely to cause harm, and may even prevent government overreach in the future. It nonetheless is a reminder of the lasting power of imaginaries of social credit, and the stakes of clarifying what the reality of the social credit system is.

The future of state-firm collaboration on tech governance

This research explicates how Chinese tech companies translated the abstract goals of social credit policy plans into practice on their platforms. Each chapter walks through examples of how technological solutionism is not going away or being critically questioned as a facet of post-2014 branding of the creation of a social credit system. This continues in spite of examples of how some citizens have avoided attempts to enroll them in other tech governance projects (e.g., “snitch” apps), or have expressed little interest in making use of municipal scoring systems’ perks.

For any future comparative research on how tech companies are enlisted to execute state-led projects for governing citizens’ behavior, it is imperative to track when, where, and how tech companies are integrating government-generated data into their platforms. This is distinct from an ongoing belief that the Chinese government coerces firms into pooling user data for the government to access at any time. In examples from my research, I saw that firms still retained some discretion around *how* to use data they shared as well as data shared with them. Tech firms that have opportunities to develop new commercial products and services as a result of access to government-generated data they would not otherwise be able to use, for example, might be incentivized to participate in surveillance practices like mass use of face recognition. Didi’s sharing of aggregated data on ride-hailers’ outstanding debts by city, rather than an approach of sharing individual user data, demonstrates one way firms can negotiate giving the state a view into a particular trend without raising consumer privacy concerns for users. Another area to watch could be how tech platforms will comply with new rules for managing recommender algorithms. The ideologically-driven parts of these rules referring to “positive energy” (正能量) provide a particularly thorny demand to translate into consistent, compliant practice, raising concerns about how the state might impel firms to use government-generated data on their platforms to advance ideological goals.²³¹ In any of these potential scenarios, the assumed authoritativeness granted to state data and the potential inability for any actors to challenge it could be the source of civil liberties violations.

In addition, the difficulty of carrying out a nationally uniform vision for the social credit system is reflected in the localized, case-by-case models of state-firm partnerships that make such a top-down approach a distant reality. Interoperability challenges I raise in Chapter 3 reinforce that China is not the monolith it is often

²³¹ “Translation: Internet Information Service Algorithmic Recommendation Management Provisions – Effective March 1, 2022.” DigiChina. <https://digichina.stanford.edu/work/translation-internet-information-service-algorithmic-recommendation-management-provisions-effective-march-1-2022/>.

assumed to be—and that future projects of a similar nature will likely be built to accommodate local conditions and priorities. Finally, the language of co-production arose from both the tech side (“co-regulation” at Meituan) and the government side (“social co-governance” to describe food safety platforms in Hebei), reflecting some cohesion between how each side related to one another. Tech firms are constantly testing strategies to retain the degree of autonomy they hold in these relationships.

The end of the alliance model?

In my research, companies read signals from the state to decide on where it was easy or beneficial for them to cooperate, and on where they could evade or push back without major repercussions. The space for the latter might be more constrained now than it was in the last seven years given regulators’ tightening grip over the tech industry in China. It is an open question whether features such as incremental compromises from tech companies, data sharing channels between individual companies and individual government organizations, and “alliances” comprising multiple tech companies who sign on to somewhat vague terms of compliance with state expectations will disappear altogether in this more stringent new regulatory climate.

As professor of law Shen Kui phrased it, tech companies are “credit norm producers” who provide ideas the state seeks to replicate. From JD’s lead in setting up the “Sunshine Integrity Alliance” made up of platform companies who pledged to cut down on “credit manipulation” behavior, to governments attempting to learn from companies how they designed their “off-label” uses of consumer credit scoring and rewards schemes to raise user engagement, companies had an upper hand in these experiments in co-production. Their exposure to government actors in these spaces also gave them some insight into another strategy, of preemptive compliance with future legislation they anticipated. Didi’s internal rating systems and the broader “anti-credit manipulation alliances” in retrospect acted as rehearsals of early compliance with the E-Commerce Law. The instinct that one day such a tool could become externalized and solidified as part of a broader government project put tech companies on alert to make careful initial design choices.

Moving in the opposite direction of preemptive compliance, other strategies fit a pattern of attempting to satisfice demands rather than over-comply. Major Chinese tech companies recognized that not all government departments have equal power of compellence, and where possible, the companies refused to comply with orders when these conflicted with their business interests. The room for such resistance may be limited in the wake of China’s ongoing tech crackdown. At the same time, state favor the firms might have previously amassed for their participation in social credit initiatives proved to be so minimal that these companies may be more hesitant to participate in similar undertakings in the future.

Closer examination of these state-firm partnerships also reveals the specific benefits the state extracts from them. To enact meaningful rewards schemes like the Xinyi+ project discussed in Chapter 2, or for rewards specific to each tech platform, the

state needed tech companies' buy-in. Both redlisting and rewards schemes were more sparsely defined and distributed than social credit's punitive measures, in part because the state could not afford to subsidize rewards that entice users in quite the same way tech companies have been able to. Some of these partnerships enabled government bodies to monitor tech companies while appearing to merely monitor trends in user behavior. When it comes to city-level pilot experiments such as those described in Chapter 3, there were even more limitations given both small firms' and municipal governments' fear of overstepping the law, and their relative constraints on resources compared to the bigger companies I focus on in the other two chapters.

Performative governance reveals its limits

A methodologically daunting question that lingers in the background of the social credit system literature is whether or not the system has made a major contribution to social trust in China. It is not a coincidence that in recent years, some of the fields in which companies granted rewards were the same ones to have faced scandals for deceiving users and leaving them in dire financial straits. For a short period of time, major tech firms' participation in these rewards programs may even have been a diversion from how these companies actively contributed to, rather than prevented, the disintegration of societal trust in China.

This irony of the performativity of 'integrity culture' has not been critiqued in China as being directly related to a failure of the social credit system. Yet other examples abound. The State Administration for Market Regulation's USD \$31 million of fines levied against merchants on Chinese internet platforms for the same "credit manipulation" activities such as false reviews hints at the limits of what industry alliances and tech companies' "self-discipline" could achieve. The knowledge work that expert communities are doing in WeChat Public Accounts to educate each other and the public on social credit's evolving strictures and markets similarly reflect shortcomings in state efforts to ensure citizens understand this for themselves. Studies done using procurement data to provide the kind of transparency the state promises but fails to deliver may dwindle in the future, as many platforms are retaliating against foreign researchers' scraping and analysis of open source data by imposing anti-scraping rules on a site-by-site basis, stymieing comparative work.

This dissertation has attempted to avoid a trap observers fall into when talking about China, which involves slippage between what *could* happen given today's surveillance infrastructure and what is confirmed to already be happening. Social credit is not the chilling dystopia it is still assumed to be in many parts of the world. This is not the equivalent of saying that it has no potential to infringe on Chinese citizens' rights. Instances of mission creep still linger in some of its less-examined corners, such as the repurposing of a news app's missing persons push notification system to sending people alerts about judgment defaulters, and attempts to predict where illegal housing units are in Fuzhou using repurposed public credit data. Some city scoring systems' rules include point deductions for behaviors that either are not codified in the law as illegal, or that are so subjective they can unfairly target people who have done nothing

wrong, such as online speech that is disfavorable to the state and that censors deem to be a 'rumor' or 'misinformation.'

Misunderstandings about the difference between inventing new rules and punishments versus more effectively implementing existing Chinese law emphasize the biggest lesson for anyone seeking reform in China. Efforts at targeting technology companies alone will not suffice here, as algorithmic decision-making systems and artificial intelligence play minor roles in social credit's implementation. Changes to either provide little recourse given that their power rests with their underlying legal bases. Much of what makes the social credit system unsettling can be traced back to Chinese law. Legal reform, as insurmountable as it may seem in today's China, must take precedence to avoid the outcomes that critics have long anticipated.

Bibliography

Batke, Jessica, and M. Ohlberg. "State of Surveillance: Government Documents Reveal New Evidence on China's Efforts to Monitor Its People." *ChinaFile*. October 30, 2020. <https://www.chinafile.com/state-surveillance-china>.

Beraja, Martin, D.Y. Yang, and N. Yuchtman. "Data-intensive Innovation and the State: Evidence from AI Firms in China." *Review of Economic Studies* (Forthcoming). (2022). http://davidyyang.com/pdfs/ai_draft.pdf.

"China's Most Advanced Big Brother Experiment Is a Bureaucratic Mess." *Bloomberg*. June 18, 2019. <https://www.bloomberg.com/news/features/2019-06-18/china-social-credit-rating-flaws-seen-in-suzhou-osmanthus-program>.

Botsman, Rachel. "Big data meets Big Brother as China moves to rate its citizens." *Wired*. October 21, 2017. <https://www.wired.co.uk/article/chinese-government-social-credit-score-privacy-invasion>.

Brauneis, Robert and E.P. Goodman. "Algorithmic Transparency for the Smart City." *Yale Journal of Law & Technology* 20.(2018): 103-176.

Breznitz, Dan and Michael Murphree. *Run of the Red Queen: Government, Innovation, Globalization, and Economic Growth in China*. New Haven: Yale University Press. (2012).

Chen, Huirong and S.C. Greitens. "Information capacity and social order: The local politics of information integration in China." *Governance* 35, no. 2. (2022).

Chen, Julie and Jack Qiu. "Digital utility: Datafication, regulation, labor, and DiDi's platformization of urban transport in China." *Chinese Journal of Communication* 12, no. 3. (2019).

陈薇 [Chen Wei]. "'老赖曝光平台'开通一年 207名失信被执行人履行义务" ["One Year After Opening Laolai Exposure Platform, 207 Dishonest People Subjected to Enforcement Fulfilled Their Obligations"].《河南商报》 [Henan Business Times]. September 7, 2018. <https://jr.dahe.cn/2018/09-07/372000.html>.

Chen, Yongxi and Anne S.Y. Cheung. "The Transparent Self under Big Data Profiling: Privacy and Chinese Legislation on the Social Credit System." *The Journal of Comparative Law* 12, no. 2. (2017): 364.

Chen, Yu-jie, C. Lin, and H. Liu. "'Rule of Trust': The Power and Perils of China's Social Credit Megaproject." *Columbia Journal of Asian Law* 32, vol. 1. (2018).

"广东星级志愿者可享受加油和购物优惠" ["Starred Volunteers Can Enjoy Refueling and Shopping Benefits in Guangdong"].《中国城市信用》[China City Credit]. October 7, 2018.

"南宁青秀法院与今日头条签追逃公益项目协议" ["Nanning, Qingxiu Court Signed Agreement on Public Welfare Project with Toutiao"].《中国法院网》[China Court]. January 29, 2018.

<https://www.chinacourt.org/article/detail/2018/01/id/3187297.shtml>.

"'基本解决执行难'第三方评估指标体系调整三个核心指标适用一票否决" ["Fundamentally Resolve Enforcement Challenges,' Third-Party Evaluation Index System's Adjustment of Three Core Indicators Applies One-Vote Veto"].《中国法院网》[China Court]. May 26, 2018.

<https://www.chinacourt.org/article/detail/2018/05/id/3318507.shtml>.

"净化电商市场 政企联手反炒信" ["Cleaning Up E-commerce Market, Government and Enterprises Team Up to Counter Credit Speculation"].《中国招标》[China Tendering 1]. (2017).

Chorzempa, Martin . "Massive P2P Failures in China: Underground Banks Going Under." Peterson Institute for International Economics. August 21, 2018.

<https://www.piie.com/blogs/china-economic-watch/massive-p2p-failures-china-underground-banks-going-under>.

"Delivery Workers, Trapped in the System." Chuang. November 12, 2020.

<https://chuangcn.org/2020/11/delivery-renwu-translation/>.

"热议信用城市，助推城市信用建设提速" [Credit Cities a Hot Topic in Promoting the Construction of Urban Credit].《金融电子化》[Computerization of Finance]. (2017): 111.

"食品安全'红黑名单'作用恐难高估" ["The Role of Food Safety 'Red- and Blacklists' Is Underestimated"].《协商论坛》[Consultative Forum]. 2014(06).

“信用红黑名单管理制度出台” [“Credit Red- and Blacklist Management Systems Launched”].《信用中国》[Credit China]. 2017(11).

“多方协同 共推信用城市建设” [“Multiple Parties Collaborate to Build a Credit City”].《信用中国》[Credit China]. (2018).

“海东中院与今日头条合作 利用‘弹窗’追查‘老赖’” [“Donghai Intermediate Court and Toutiao Cooperate, Use ‘Pop-up Windows’ to Track Down ‘Laolai’”].《信用中国》[Credit China]. January 3, 2018.

https://www.creditchina.gov.cn/home/dianxinganli1/201801/t20180102_105448.html.

“‘信易+’ 红利 ——我国在重点民生领域推行守信激励系列项目扫描” [“Xinyi+’ Benefits — China Implements Series of Trustworthy Incentive Programs of in Main Areas of People's Livelihoods”]. Credit China. May 23, 2019.

https://www.creditchina.gov.cn/xinyongkanwu/xiliebaodao/xileibaodao1/wenzhangliebiao1/wendangliebiao/201905/t20190523_156479.html.

“信用红黑名单管理制度出台‘双十一’预警报告发布” [“Credit Red- and Blacklist Management System Introduced in Release of ‘Double Eleven’ Day Early Warning Report”].《信用中国》[Credit China]. August 9, 2019.

“让更多信用城市撑起更高水平的信用中国” [“Let Even More Credit Cities Support Higher Levels of Credit China”]. Credit China. August 23, 2018.

https://www.creditchina.gov.cn/xinyongkanwu/xiliebaodao/xileibaodao1/wenzhangliebiao1/wendangliebiao/201808/t20180823_124249.html.

“兴庆区法院借助网络攻坚执行失联“老赖”主动现身还款” [“Xingqing District Court Relies on Internet for Enforcement, ‘Laolai’ Take Initiative to Repay”].《信用中国》[Credit China]. October 23, 2019. <http://credit.tjdl.gov.cn/401/18028.html>.

“榆中县法院举办法院开放日活动并召开审判执行工作新闻发布会。” [“Yuzhong County Court Held Court Open Day Activities and a Press Conference on Trial Enforcement Work”].《信用中国》[Credit China]. December 19, 2019.

https://credit.lanzhou.gov.cn/323.news.detail.dhtml?news_id=9683.

Creemers, Rogier. “Planning outline for the construction of a social credit system (2014–2020).” China Copyright and Media (2014).

<https://chinacopyrightandmedia.wordpress.com/2014/06/14/planning-outline-for-the-construction-of-a-social-credit-system-2014-2020/>.

“河南推进智慧法院建设” [“Henan Promotes Smart Court Construction”]. Cyberspace Administration of China. August 7, 2017.
http://www.cac.gov.cn/2017-08/07/c_1121440813.htm.

Dai, Xin. “Toward a Reputation State: The Social Credit System Project of China.” (2018). https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3193577.

Daum, Jeremy. “China through a glass, darkly.” China Law Translate. (2017).
<http://www.chinalawtranslate.com/seeing-chinese-social-credit-through-a-glass-darkly/?lang=en> 2017.

“Translation: Internet Information Service Algorithmic Recommendation Management Provisions – Effective March 1, 2022.” DigiChina.
<https://digichina.stanford.edu/work/translation-internet-information-service-algorithmic-recommendation-management-provisions-effective-march-1-2022/>.

Ding, Iza. “Performative Governance.” World Politics 72, no. 4. (2020).
 董宇澜 [Dong Yulan]. “将杭州打造成为国际化信用城市” [“Transforming Hangzhou Into an Internationalized Credit City”].《浙江经济》 [Zhejiang Economy]. (2016).

Engelmann, Severin, M. Chen, F. Fischer, C. Kao, J. Grossklags. “Clear Sanctions, Vague Rewards: How China's Social Credit System Currently Defines ‘Good’ and ‘Bad’ Behavior.” FAT* '19: Proceedings of the Conference on Fairness, Accountability, and Transparency. (2019).

Engstrom, David Freeman, D.E. Ho, C. Sharkey, and M. Cuéllar. “Government by Algorithm: Artificial Intelligence in Federal Administrative Agencies.” (2020): 10.
<https://www-cdn.law.stanford.edu/wp-content/uploads/2020/02/ACUS-AI-Report.pdf>.

Eubanks, Virginia. Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor. New York: Macmillan. (2018).

Proposal for a Regulation of the European Parliament and of the Council Laying Down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act) and Amending Certain Union Legislative Acts. EUR-Lex.
<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021PC0206>.

Feng, Emily. "Scandals In China Bring Calls For More Regulation Over Tech Companies." NPR. February 5, 2021.
<https://www.npr.org/2021/02/05/964379930/scandals-in-china-bring-calls-for-more-regulation-over-tech-companies>.

Feng, Emily. "China tightens restrictions and bars scholars from international conferences." NPR. March 30, 2022.
<https://www.npr.org/2022/03/30/1089631713/china-tightens-restrictions-and-bars-scholars-from-international-conferences?t=1658674653515>.

"Didi caught as China and US battle over data." Financial Times. July 6, 2021.
<https://www.ft.com/content/00403ae5-7565-413e-907d-ad46549375ba>.

Gagliardone, Iginio. *China, Africa, and the Future of the Internet*. London: Bloomsbury. (2019).

"欠债不还 你或将成为朋友圈的‘名人’——榆中法院微信朋友圈定向精准打击‘老赖’" ["If You Don't Pay Your Debts, You May Become a 'Celebrity' in Your WeChat Friends Circles—Yuzhong Court's WeChat Moments Used for Targeted Attacks on 'Lao Lai'"]. 甘肃榆中法院网 [Gansu Yuzhong Intermediate Court Web]. October 19, 2018.
<http://yzxfy.cncourt.org/public/detail.php?id=1400>.

Gao, Li and James Stanyer. "Hunting corrupt officials online: the human flesh search engine and the search for justice in China." *Information, Communication & Society* 17, no. 7. (2014).

Gao, M., J. Yen, and M. Liu "Determinants of defaults on P2P lending platforms in China." *International Review of Economics and Finance* 72. (2021).

高扬 [Gao Yang]. "政企牵手开展电商领域社会共治" ["Government and Enterprises Join Hands to Carry Out Social Co-Governance in Field of E-commerce"].《秦皇岛日报》 [Qinghuangdao Daily]. September 4, 2020.

"想赖账？头条推送！全国首家省级‘老赖网络曝光’平台启动" ["Thinking of Defaulting? Pushed to Toutiao! Country's First Province-Level 'Online Laolai Exposure' Platform Launched"].《环球网》 [Global Times]. August 19, 2017.
<https://china.huanqiu.com/article/9CaKrK4Mjj>.

“西城发悬赏公告 提供这8个“老赖”线索最高奖129万” [“Xicheng Issued Announcement of Maximum Reward of 1.29 Million RMB to Provide Clues About These 8 ‘Laolai’”].《环球网》[Global Times]. August 30, 2018. <https://m.huanqiu.com/article/9CaKrKc1xl>.

Greitens, Sheena, Rory Truex. “Repressive Experiences among China Scholars: New Evidence from Survey Data.” *The China Quarterly* 242. (2020).

顾敏、浦敏琦 [Gu Min, Pu Minqi]. “无锡借力大数据抓‘老赖’” [“Wuyi Leverages Big Data to Catch ‘Laolai’”]. *Xinhua*. July 18, 2018. <https://bigdata.huanqiu.com/article/9CaKrKaw1C>.

Han, Dong. “Search boundaries: human flesh search, privacy law, and internet regulation in China.” *Asian Journal of Communication* 28, no. 4. (2018).

阚丽丽 [Han Lili]. “规范管理‘红黑名单’社会信用体系建设提档加速” [Standardize Management of ‘Red- and Blacklists,’ Accelerate the Construction of the Social Credit System].《新产经》 [New Finance]. 2017(86): 73-75.

Hansen, Hans K. and Richard Weiskopf. “From Universalizing Transparency to the Interplay of Transparency Matrices: Critical insights from the emerging social credit system in China.” *Organization Studies* 42, no. 1. (2021): 121.

郝绍彬 [Hao Shaobin]. “精准曝光‘老赖’值得借鉴探索” [“Accurate Exposure of ‘Laolai’ Worth Learning From and Exploring”].《人民法院报》 [People’s Court Daily]. May 28, 2017. http://rmfyb.chinacourt.org/paper/html/2017-05/28/content_125984.htm?div=-1.

Hartman, Melissa. “Troubling anti-Asian acts reported across Santa Cruz County this week.” *East Bay Times*. April 22, 2021. <https://www.eastbaytimes.com/2021/04/22/troubling-anti-asian-acts-reported-across-santa-cruz-county-this-week/>.

Headworth, Spencer. “Getting to Know You: Welfare Fraud Investigation and the Appropriation of Social Ties.” *American Sociological Review* 84, no. 1. (2019).

Hebbar, Nidhi. “School Procurement Guide: Buying Edtech Products with Racial Equity in Mind.” https://coda.io/d/School-Procurement-Guide_dYBoc7ujwQA/School-Procurement-Guide_su9mx#_luZQD.

“庐阳法院：惩戒失信再升级 头条弹窗精确曝光‘老赖’” [“Luyang Court: Punishment for Judgment Defaulters Upgraded, Toutiao Pop-up Windows Accurately Expose 'Laolai'"]. 合肥市庐阳区人民法院 [Hefei City Luyang District People's Court]. December 18, 2017. http://luyang.gov.cn/sitecn/News_Info1.aspx?columnid=1395&id=3167.

Hersey, Frank. “China’s most popular apps are also helping find the country’s missing people.” TechNode. December 26, 2017. <https://technode.com/2017/12/26/chinas-popular-apps-also-help-find-missing-people/>.

Hoffman, Samantha. “Managing the State: Social Credit, Surveillance and the CCP’s Plan for China.” China Brief 17, (11). <https://jamestown.org/program/managing-the-state-social-credit-surveillance-and-the-ccps-plan-for-china/>.

Hoffman, Samantha. “Programming China: The Communist Party’s autonomic approach to managing state security.” (2017). <https://merics.org/en/report/programming-china>.

Hoffman, Samantha. “Social Credit: Technology-enhanced authoritarian control with global consequences.” Australian Strategic Policy Institute. (2018). <https://www.aspi.org.au/report/social-credit>.

Hornby, Lucy. “China changes tack on ‘social credit’ scheme plan.” Financial Times. July 4, 2017, <https://www.ft.com/content/f772a9ce-60c4-11e7-91a7-502f7ee26895>.

Horsley, Jamie. “China’s Freedom of Information Act Turns Eight.” Wilson Center. May 2, 2016. <https://www.wilsoncenter.org/article/chinas-freedom-information-act-turns-eight>.

Hu, Bailey. “Former Didi driver sentenced to death for murdering passenger in Shenzhen.” TechNode. December 14, 2018. <https://technode.com/2018/12/14/didi-driver-robbery-murder/>.

胡湛 [Hu Zhan]. “美团‘政企通’：开启‘政府-平台’‘线上-线下’协同治理新模式” [“Meituan ‘Government Enterprise Communication Tool’: Open ‘Government-Platform’ a New Mode of Integrated Governance of ‘Online to Offline’”]. 《中国市场监管研究》 [Research on China Market Regulation]. (2020).

Huang, Echo. "Another woman was murdered while using Didi's car-pooling service." Quartz. August 27, 2018.

<https://qz.com/1370345/another-didi-hitch-ride-hailing-driver-murdered-a-female-passenger-in-china/>.

Huang, Raffaele. "China Probes Operator of Nation's Biggest Academic Database." Wall Street Journal. June 24, 2022.

<https://www.wsj.com/articles/china-probes-operator-of-nations-biggest-academic-database-11656074605>.

惠滢、李雅娟 [Hui Ying, Li Yajuan]. "电商诚信建设进入跨界合作时代" ["Construction of Integrity in E-commerce Has Entered Era of Cross-Border Cooperation"].《中国青年报》 [China Youth Daily]. December 11, 2017.

http://cx.xinhuanet.com/2017-12/11/c_136816429.htm.

"China's Algorithms of Repression: Reverse Engineering a Xinjiang Police Mass Surveillance App." Human Rights Watch report. May 1, 2019.

<https://www.hrw.org/report/2019/05/01/chinas-algorithms-repression/reverse-engineering-xinjiang-police-mass>.

"长沙法院联手阿里巴巴打造'智慧执行'新模式" ["Changsha Court Partners With Alibaba to Create a New Model of 'Smart Enforcement'"].《湖南日报》 [Hunan Daily]. March 28, 2019. https://k.sina.cn/article_2288064900_8861198402000k2wk.html.

Hvistendahl, Mara. "Inside China's Vast New Experiment in Social Ranking." Wired. December 14, 2017. <https://www.wired.com/story/age-of-social-credit/>.

纪森森、等著 [Ji Sensen et al].《信用经济：下一个十年红利风口》 [Credit Economy: The Next Decade of Dividends]. 电子工业出版社 [Publishing House of Electronics Industry]. (2019): 54.

冀天福 [Ji Tianfu]. "当了网红的'老赖'——河南高院'老赖'网络曝光平台工作探访" ["The 'Laolai' Who Became an Internet Celebrity——Henan High Court's Work Visit to Online 'Laolai' Exposure Platform"].《人民法院报》 [People's Court Daily]. September 8, 2017. http://rmfyb.chinacourt.org/paper/html/2017-09/08/content_129953.htm?div=-1.

Jiang, Jinglin and L. Liao, Z. Wang, X. Zhang. "Government Affiliation and Peer-To-Peer Lending Platforms in China." Journal of Empirical Finance 62. (2021).

Jiang, Min. A brief prehistory of China's Social Credit System. *Communication & the Public* 5. (2020) <https://doi.org/10.1177/2057047320959856>.

江潇 [Jiang Xiao]. “‘红名单’: 精准帮扶助企业走出困境” [“‘Redlists’: Accurately Helping Enterprises Out of Their Dilemma”]. 《攀枝花日报》 [Panzhihua Daily]. July 15, 2015.

“关于‘人民法院基本解决执行难第三方评估指标体系’的调整说明” [“Explanation on Adjustment of ‘Third-Party Evaluation Index System for People's Courts to Fundamentally Resolve Enforcement Challenges’”]. 江苏省法院切实解决执行难信息网 [Jiangsu Province Court Effective Solutions to Enforcement Challenges Information Network]. July 2, 2018. <http://jszx.court.gov.cn/1150/ExecuteAssess/36035.jhtml>.

靳斯慰 [“Jin Siwei”]. “贵州出台社会信用体系建设规划纲要” [“Guizhou Debuts Outline for Social Credit Construction Plan”]. 《金融时报》 [Finance Times]. October 9, 2014.

Kim, Jieun, R.E. Stern, B.L. Liebman, and X. Wu. “Closing Open Government: Grassroots Policy Conversion of China’s Open Government Information Regulation and Its Aftermath.” *Comparative Political Studies* 55, no. 2. (2022).

Knight, Adam. “Technologies of Risk and Discipline in China’s Social Credit System.” Chap. 9 In *Law and the Party in China: Ideology and Organisation*, edited by Rogier J. E. H. Creemers and Susan Trevaskes, p. 239. Cambridge, Cambridgeshire: Cambridge University Press, 2020.

Koetse, Many. “Baihang and the Eight Personal Credit Programmes: A Credit Leap Forward.” What's on Weibo. June 10, 2018. <https://www.whatsonweibo.com/baihang-and-the-eight-personal-credit-programmes-a-credit-leap-forward/>.

Kostka, Genia. “China’s social credit systems and public opinion: Explaining high levels of approval.” *New Media & Society* 21, no. 7. (2019)

Lageson, Sarah E. “Digital Punishment’s Tangled Web.” *Contexts*. March 17, 2016. <https://contexts.org/articles/digital-punishments-tangled-web/>.

“河南省安阳市北关区法院: 打造‘智慧法院’用科技解决‘执行难’” [“Beiguan District Court, Anyang City, Henan Province: Build a ‘Smart Court’ to Solve ‘Enforcement Challenges’”]

with Technology”].《法制日报》 [Legal Daily]. January 20, 2020.
http://www.legaldaily.com.cn/index/content/2020-01/20/content_8105946.htm.

“法院持续加大失信被执行人惩戒力度” [“Courts Continue to Expand Severity of Punishment for Judgment Defaulters”].《法制日报》 [Legal Daily]. August 16, 2017.
<http://www.zx0472.com/news/show-32028.html>.

“山东烟台中院利用人工智能曝光‘老赖’” [“Shandong’s Yantai Intermediate Court Uses Artificial Intelligence to Expose ‘Laolai’”].《法治周末》[Legal Weekly]. June 2, 2017.
http://yq.jcrb.com/SJHLW/HLWTLZ/201706/t20170602_1759118.html.

Leutert, Wendy. “Innovation through iteration: Policy feedback loops in China’s economic reform.” *World Development* 138. (2021).

Li, Ding, H. Xiao, J. Ding, and S. Ma. “Impact of performance contest on local transformation and development in China: Empirical study of the National Civilized City program.” *Growth and Change* 53. (2021).

Li, Jing. “Liberating or Constraining? How technology capital is reshaping the media landscape in China.” Reuters Institute report. 2017.
<https://reutersinstitute.politics.ox.ac.uk/our-research/liberating-or-constraining-how-technology-capital-reshaping-media-landscape-china>.

Liang Chenyu. “Didi Overhauls Safety Measures Following Passenger Murder.” *Sixth Tone*. May 16, 2018.
<http://www.sixthtone.com/news/1002285/didi-overhauls-safety-measures-following-passenger-murder>.

Liang, Fan, and Yuchen Chen. “The making of ‘good’ citizens: China’s Social Credit Systems and infrastructures of social quantification.” *Policy Internet* 14, no. 1. (2022)

李强 [Li Qiang]. “粤拟建立诚信红黑名单制” [Guangdong Plans to Establish Integrity Redlist and Blacklist System”].《南方日报》 [Southern Daily]. September 4, 2014.

廖仁治[Liao Renzhi]. “重庆推出代理人‘红名单’制度” [“Chongqing Launches a Representative ‘Redlist’ System”].《中国保险报》 [China Insurance News]. May 28, 2003.

Lindtner, Silvia. *Prototype Nation: China and the Contested Promise of Innovation*. Princeton, NJ: Princeton University Press. 2020.

Liu, Chuncheng. "Multiple Social Credit Systems in China." *Economic Sociology: the European Electronic Newsletter*. (2019). 21, no. 1.

刘珂 [Liu Ke]. "河南商丘:今日头条显威力, '老赖'主动把钱还" ["Shangqiu, Henan: Toutiao Shows Force, Laolai Takes Initiative to Repay"]. 河南省商丘市睢阳区人民法院 [Henan Province Shangqiu City Suiyang District Court]. August 15, 2019.
<http://jszx.court.gov.cn/2050/ExecuteNewsletter/233969.jhtml>.

Liu, Chuxuan and Eli Friedman. "Resistance under the Radar: Organization of Work and Collective Action in China's Food Delivery Industry." *The China Journal* 86. (2021).

刘梦雨 [Liu Mengyu]. "反'炒信'狙击战——我国电子商务领域惩治刷单炒信行为纪实" ["Sniper War Against 'Credit Speculation' —A Real Account of Punishment of Fraudulent Credit Speculation in Chinese E-commerce"].《信用中国》[China Credit]. December 15, 2018.

刘勋 [Liu Xun]. "老赖信息就应精准曝光" ["Laolai Information Should Be Accurately Exposed"]. *Xinhua*. January 31, 2018.

http://www.xinhuanet.com/2018-01/31/c_1122344103.htm.

刘源隆 [Liu Yuanlong]. "创建信用城市,谁是最大'赢家'?" ["In Establishing Credit Cities, Who is the Biggest 'Winner'?"].《小康》[Xiaokang 22] (2016).

McDonald, Tom and Li Dan. "Alipay's 'Ant Credit Pay' meets China's factory workers: the depersonalisation and re-personalisation of online lending." *Journal of Cultural Economy* 14, no. 1. (2021).

Meissner, Mirjam. "China's Social Credit System: A big-data enabled approach to market regulation with broad implications for doing business in China." *Mercator Institute for China Studies*. (2017).

<https://merics.org/en/report/chinas-social-credit-system>.

Mozur, Paul, Muiy Xiao, and John Liu. "'An Invisible Cage': How China Is Policing the Future." *New York Times*. June 25, 2022.

<https://www.nytimes.com/2022/06/25/technology/china-surveillance-police.html>.
MuckRock, <https://www.muckrock.com/>.

《关于加强和规范守信联合激励和失信联合惩戒对象名单管理工作的指导意见》 ["Guiding Opinions on Strengthening and Regulating the Management of the List of Targets for Joint Incentives for Trustworthy and Joint Punishment for Dishonesty"]. National

Development and Reform Commission. January 19, 2018.

https://www.ndrc.gov.cn/xxgk/zcfb/tz/201803/t20180308_962679.html?code=&state=123.

Page, Jeremy and Eva Dou. "In Sign of Resistance, Chinese Balk at Using Apps to Snitch on Neighbors." Wall Street Journal. December 29, 2017.

<https://www.wsj.com/articles/in-sign-of-resistance-chinese-balk-at-using-apps-to-snitch-on-neighbors-1514566110>.

Pan, Jennifer. *Welfare for Autocrats: How Social Assistance in China Cares for its Rulers*. Oxford: Oxford University Press. 2020.

Passi, Samir and S. Barocas. "Problem Formulation and Fairness." Conference on Fairness, Accountability, and Transparency (FAT* '19), January 29-31, 2019, Atlanta, GA, USA. <https://arxiv.org/abs/1901.02547>.

彭东海 [Peng Donghai]. "四大网络订餐平台将联合建立'黑名单'制度" ["Four Major Online Food Delivery Platforms Will Jointly Establish a 'Blacklist' System"].《中国食品安全报》 [China Food Safety Journal]. April 22, 2017.

"打造'智慧执行系统'决战基本解决执行难" ["Creation of 'Smart Enforcement System' Is Decisive Battle in Fundamentally Solving the Enforcement"].《人民法院报》 [People's Court Daily]. November 6, 2018.

http://rmfyb.chinacourt.org/paper/html/2018-11/06/content_145295.htm?div=-1.

P.R.C. E-commerce Law (2018) [English Translation]. August 31, 2018.

<https://www.chinalawtranslate.com/en/p-r-c-e-commerce-law-2018/>.

"'They Don't See Their Work as Surveillance': Jennifer Pan on Chinese Welfare and Society. Public Books. June 30, 2021.

<https://www.publicbooks.org/they-dont-see-their-work-as-surveillance-jennifer-pan-on-chinese-welfare-and-society/>.

邱海峰、王青青 [Qiu Haifeng, Wang Qingqing]. "信用红黑名单这样影响生活" ["This is How Credit Red- and Blacklists Influence Life"]. 人民日报海外版 [People's Daily overseas edition]. July 11, 2018.

<https://www.society.people.com.cn/n1/2018/0711/c1008-30138986.html>.

“ByteDance's Toutiao ordered by China to halt new registrations since Sept.” Reuters. July 16, 2021.

<https://www.reuters.com/technology/bytedances-toutiao-ordered-by-china-halt-new-registrations-since-sept-sources-2021-07-16/>.

Rona-Tas, Akos. “The Off-Label Use of Consumer Credit Ratings.” *Historical Social Research* 42. (2017).

Rosenblat, Alex, K.E.C. Levy, S. Barocas, and T. Hwang . “Discriminating Tastes: Uber's Customer Ratings as Vehicles for Workplace Discrimination.” *Policy & Internet* 9, no. 3. (2017).

Rosenblat, Alex. *Uberland: How Algorithms Are Rewriting the Rules of Work*. Berkeley: University of California Press. (2019.)

Sacks, Samm. “Data Security and U.S.-China Tech Entanglement.” *Lawfare*. April 2, 2020. <https://www.lawfareblog.com/data-security-and-us-china-tech-entanglement>.

“京东金融打造智能城市信用平台用AI和大数据服务城市信用” [“JD Finance Establishes Smart City Credit Platform, Uses AI and Big Data to Serve Credit City”].《证券时报》[Securities Times]. 2018. <http://baijiahao.baidu.com/s?id=1603207392402141026>.

Segal, David. “Mugged by a Mug Shot Online.” *New York Times*. October 5, 2013. <https://www.nytimes.com/2013/10/06/business/mugged-by-a-mug-shot-online.html>

Shen, Hong, C. Faklaris, H. Jin, L. Dabbish, J. Hong. “‘I Can't Even Buy Apples If I Don't Use Mobile Pay?': When Mobile Payments Become Infrastructural in China.” *Proceedings of the ACM on Human-Computer Interaction* 4. CSCW2. (2020).

沈岍 [Shen Kui]. “社会信用体系建设的法治之道” [“The Rule of Law Approach to the Construction of Social Credit System”]. 《中国法学》[China Legal Science]. (2019).

Shepherd, Christian and Yuan Yang. “Rivals rush to take advantage of security crackdown on China’s Didi.” *Financial Times*. July 13, 2021. <https://www.ft.com/content/0dd3f1b4-705a-4ea4-9ade-3e105b4cfe1f>.

石新中 [Shi Xinzhong]. “施行红黑名单制度最终是要实现信用奖惩” [“Implementing Red- and Blacklist System Ultimately Achieves Credit Rewards and Punishments”].《中国信用》[Credit China]. January 2018.

“河南今年2168人被判拒执罪 开通‘老赖网络曝光’平台” [“In Henan 2,168 People Were Convicted of Refusing Enforcement This Year, "Online Laolai Exposure" Platform Opened"]. Sina. August 18, 2017.

<http://news.sina.com.cn/s/2017-08-18/doc-ifykcqav9889903.shtml>.

Sloane, Mona, R. Chowdhury, J.C. Havens, T. Lazovich, and L.C.R. Alba. “AI and Procurement: A Primer.” (2021). <https://doi.org/10.17609/bxzf-df18>.

“他是对标芝麻信用和腾讯征信的‘中外混血富二代ZRobot CEO’ [“He’s the ‘Chinese-Foreign Mixed-Blood Second-Generation’ ZRobot CEO Taking on Sesame Credit and Tencent Credit”]. August 2, 2018. Sohu.

https://www.sohu.com/a/244725110_400678.

“今日头条与河南高院合作一周年 成功促使207名失信人还款” [“First Anniversary of Toutiao’s Cooperation with Henan High Court, Successfully Prompting 207 Trust-Breakers Repay”]. Sohu. September 6, 2018.

https://www.sohu.com/a/252467810_533828.

[“Wuxi Intermediate Court: Create a ‘Smart Execution System’ to Fundamentally Solve Enforcement Challenges”]. Sohu. November 6, 2018.

https://www.sohu.com/a/273667577_117927.

“浙江高院与阿里合作 法律文书寄到淘宝收货地址” [“Zhejiang High Court and Alibaba Cooperate, Legal Documents Mailed to Taobao Receiving Addresses”]. Sohu.

November 24, 2015. <http://news.sohu.com/20151124/n427933546.shtml>.

宋家雨 [Song Jiayu]. “‘黑/红名单’的背后” [“Behind Black/Redlists”]. 《网络世界》 [Internet World]. August 30, 2004.

“How China’s Young People Became Addicted to Debt.” South China Morning Post. May 28, 2017.

<https://www.scmp.com/news/china/economy/article/2096019/how-chinas-young-people-became-addicted-debt>.

“国务院关于建立完善守信联合激励和失信联合惩戒制度加快推进社会诚信建设的指导意见国发 (2016) 33号” [“Guiding Opinions of the State Council on Establishing and Improving the Joint Incentive System for Keeping Trust and Joint Punishment for Untrustworthy and Accelerating the Construction of Social Integrity (2016) No. 33”].

State Council. June 12, 2016.

http://www.gov.cn/zhengce/content/2016-06/12/content_5081222.htm.

Stern, Rachel E., M. Roberts, B.L. Liebman, A. Wang. "Automating Fairness? Artificial Intelligence in the Chinese Courts." *Columbia Journal of Transnational Law* 59. (2021).

Stevens, Hallam. "Digital Infrastructure in the Chinese Register." *Made in China Journal*. July 23, 2019.

<https://madeinchinajournal.com/2019/07/23/digital-infrastructure-in-the-chinese-register/>.

Sun, Xinmei. "'Deadbeat Map' shows which people around you are on a financial blacklist." *South China Morning Post*. January 17, 2019.

<https://www.scmp.com/abacus/tech/article/3029105/deadbeat-map-shows-which-people-around-you-are-financial-blacklist>.

"让执行变轻松 无锡法院首创智慧执行系统" ["Wuxi Court's First Smart Execution System Makes Enforcement Easier"]. 最高人民法院 [Supreme People's Court]. July 17, 2018. <http://www.cecc.org.cn/m/view/id/528137>.

Suter, Viktor. "Algorithmic Panopticon: State Surveillance and Transparency in China's Social Credit System." *Communications in Computer and Information Science*, 1349. (2020).

Tech Inquiry, <https://techinquiry.org/>.

"烟台中院人工智能技术曝光老赖：住所地周围邻居或收到推送" ["Yantai Intermediate Court's Artificial Intelligence Technology Exposes Laolai: Neighbors May Receive Push Notifications."]*《澎湃》*[ThePaper]. May 10, 2017.

https://www.thepaper.cn/newsDetail_forward_1681877.

Tham, Engen. "China bank protest stopped by health codes turning red, depositors say." *Reuters*. June 16, 2022.

<https://www.reuters.com/world/china/china-bank-protest-stopped-by-health-codes-turning-red-depositors-say-2022-06-14/>.

Vanderklippe, Nathan. "Chinese blacklist an early glimpse of sweeping new social-credit control." *The Globe and Mail*. January 3, 2018.

<https://www.theglobeandmail.com/news/world/chinese-blacklist-an-early-glimpse-of-sweeping-new-social-credit-control/article37493300/>.

Vanderklippe, Nathan. "Ottawa opens door to China's Sesame Credit for visa seekers' credit scores." *Globe and Mail*. December 2, 2018, <https://www.theglobeandmail.com/business/article-ottawa-opens-door-to-chinas-sesame-credit-for-visa-seekers-credit/>.

Waddell, Kaveh. "Blacklisting foreign businesses in China." *Axios*. August 3, 2019. <https://www.axios.com/2019/08/03/china-social-credit-businesses>.

王丽 [Wang Li]. "贵州'黑名单' '红名单' 制度使公路建设招投标公开透明" ["Guizhou 'Blacklist,' 'Redlist,' System Makes Highway Construction Procurement Open and Transparent"].《中国改革报》 [China Reform News]. July 14, 2009.

Wang, Nu. "'Black Box Justice': Robot Judges and AI-based Judgment Processes in China's Court System," 2020 IEEE International Symposium on Technology and Society (ISTAS). (2020).

王琦 [Wang Qi]. "强制执行智能化对立法的挑战与回应." ["Challenges and Responses of Intelligence Enforcement to Legislation"].《甘肃政法学院学报》 [Journal of Gansu Political Science and Law Institute]. 2020(1).

王天淇 [Wang Tianqi]. "和谐用工单位将入信用'红名单'" ["Harmonize Employers' Inclusion in Credit 'Redlists'"].《北京日报》 [Beijing Times]. August 6, 2019.

王伟 [Wang Wei]. "失信惩戒的类型化规制研究(中)" ["Regulatory Research on Typologization of Punishments for Trust-Breaking (Middle)"]. *China Credit*. (2019): 122.

王翔 [Wang Xiang]. "行政法的变迁与发展——中国法学会行政法学会研究会2019 年年会述要" ["Changes and Developments in Administrative Law—Summary of 2019 Annual Meeting of the Administrative Law Research Association of China Law Society"].《人民检察》 [People's Procuratorial Semimonthly]. (2020).

Wang, Xiaowei. *Blockchain Chicken Farm*. New York: Farrar, Straus, and Giroux. (2020).

Wu, Angela X. "Chinese Computing and Computing China as Global Knowledge Production." *Catalyst: Feminism, Theory, and Technoscience* 6, no. 2. (2020.)

Xiao, Muiyi, P. Mozur, I. Qian, and A. Cardia. "China's Surveillance State Is Growing Bigger and More Invasive. These Documents Reveal How." *New York Times*. June 21, 2022.

<https://www.nytimes.com/video/world/asia/100000008314175/china-government-surveillance-data.html>.

Xie, Echo. "Millions of court rulings removed from official Chinese database." *South China Morning Post*. June 26, 2021.

<https://www.scmp.com/news/china/politics/article/3138830/millions-court-rulings-removed-official-chinese-database>.

“‘最强’反炒信联盟成立 刷单炒信组织者将上‘黑榜’” [“‘Strongest’ Anti-Credit Speculation Alliance Established, Groups That Swipe Orders and Speculate Will Be ‘Blacklisted’”] *Xinhua*. October 27, 2016.

http://www.xinhuanet.com/politics/2016-10/27/c_1119794991.htm.

“欠钱不还成‘老赖’，过年回家遇上大麻烦!” [“If You Don’t Repay and Become a Laolai, Returning Home for the New Year Will Be a Hassle!”]. *Xinhua*. January 19, 2020.

http://www.xinhuanet.com/tech/2020-01/19/c_1125480931.htm.

Xu, Jianhua and Siying He. "Can Grid Governance Fix the Party-state's Broken Windows? A Study of Stability Maintenance in Grassroots China." *The China Quarterly*. (2022): 1-23.

薛东阳 [Xue Dongyang]. "首届中国社会信用体系建设论坛在京举办——中诚信和神州数码联合推进‘信用城市’落地" [“Inaugural China Social Credit System Construction Forum Held in Beijing—China Integrity and Shenzhou Digital Jointly Promote ‘Credit City’ Implementation”].《产权导刊》 [Property Rights Guide 6]. (2016).

Yang, Stephanie. "As China shuts out the world, internet access from abroad gets harder too." *Los Angeles Times*. June 23, 2022.

<https://www.latimes.com/world-nation/story/2022-06-23/china-great-firewall-foreign-domestic-virtual-censorship>.

Yang, Yuan and Nian Liu. "Alibaba and Tencent refuse to hand loans data to Beijing." *Financial Times*. September 19, 2019.

<https://www.ft.com/content/93451b98-da12-11e9-8f9b-77216ebe1f17>.

Yang, Zeyi. "Chinese microlending is getting weird and dangerous." Protocol. February 9, 2021. <https://www.protocol.com/china/chinese-microlending-out-of-control>.

Ye, Josh. "China moves to protect food delivery drivers from digital exploitation." South China Morning Post. July 26, 2021.
<https://www.scmp.com/tech/big-tech/article/3142588/china-moves-protect-food-delivery-drivers-digital-exploitation>.

"7年30亿：招标视角下的信用中国" ["3 Billion in 7 years: Credit China From a Procurement Perspective"] Yuandian Credit report.

苑广阔 [Yuan Guangkuo]. "守法经营者都应进入‘红名单’" ["Law-Abiding Managers Should All Be on 'Redlists'"].《广西日报》 [Guangxi Daily News]. January 9, 2019.

原勇 [Yuan Yong]. "'红黑名单'的冷思考" ["Cold Thinking on Red- and Blacklists"].《中国眼镜科技杂志》 [China Glasses Science Technology Magazine]. December 12, 2017.

Zhai, Keith. "China's Antitrust Regulator Planning to Fine Meituan About \$1 Billion." Wall Street Journal. August 6, 2021.
<https://www.wsj.com/articles/chinas-antitrust-regulator-planning-to-fine-meituan-about-1-billion-11628238951>.

Zhang, Chenchen. "Governing (through) trustworthiness: technologies of power and subjectification in China's social credit system." Critical Asian Studies 52, vol. 4. (2020)

Zhang, Jane. "China punishes online merchants for fake reviews, inflated sales in latest market crackdown." South China Morning Post. July 23, 2021.
<https://www.scmp.com/tech/policy/article/3142275/china-punishes-online-merchants-fake-reviews-inflated-sales-latest>.

张伟 [Zhang Wei]. "贵州评选‘诚信示范企业’" ["Guizhou Chosen for 'Honest Enterprise Demonstration'"].《贵州政协报》 [Guizhou Party Committee News]. January 12, 2016.

张永旺 [Zhang Yongwang]. "建设工程电子招标数据应用场景分析" [Analysis of Application Scenarios for Digital Procurement Data on Construction Projects].《中国管理信息化》[China Management Informationization 9]. (2019).

章政 [Zhang Zheng]. “让信用城市成为中国特色市场经济的领跑者” [“Let the Credit City Become the Leader of the Market Economy with Chinese Characteristics”].《中国信用》 [China Credit]. (2017): 112-113.

Zhao, Runhua. “Didi tests in-car video and audio recording for passengers’ ride safety.” TechNode. July 26, 2018.
<https://technode.com/2018/07/26/didi-tests-in-car-video-and-audio-recording-for-passengers-ride-safety/>.

“国家发改委与滴滴签约就乘客‘黑红名单’进行信息共享” [“National Development and Reform Commission and Didi Sign Agreement to Share Information on Rider ‘Blacklists and Redlists’”].《浙江新闻》 [Zhejiang News]. March 7, 2018.

“‘信易行’项目启动” [“‘Xinyi Transportation’ Project Launched”].《中关村年鉴》 [Zhongguancun Yearbook]. (2019).

周凌如、李昭菲 [Zhou Lingru, Li Zhaofei]. “长沙中院搭建大数据分析平台 给老赖织了一张天网” [“Changsha Intermediate Court Built a Big Data Analysis Platform, Weaved a Skynet for Lao Lai”].《潇湘晨报》 [Xiaoxiang Morning News]. March 27, 2019.
<http://hunan.voc.com.cn/mobile/article/201903/201903270912532326.html>.

Zhu, Julie. “Didi in talks with state-backed Westone to hand over data control-sources.” Reuters. August 6, 2021.
<https://www.reuters.com/world/china/exclusive-didi-talks-with-westone-hand-over-data-control-after-ipo-dustup-2021-08-06/>.