Trust is good, control is better: technopolitical visions and realities in China's social credit system

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Introduction

Trust is Good, Control is Better

In the grand arc of China's rise, the year 2008 is of particular significance. Heralded as China's "coming-out party", the Beijing Summer Olympics marked the nation's triumphal step on to the world stage.[1] Yet domestically, the months leading up to the opening ceremony were marked by a barrage of scandals. In March, one of China's most high-profile civil lawsuits concluded, in which the suing of a Good Samaritan for damages triggered public outcry.[2] In May, the collapse of 7,000 "tofu-dregs schoolhouses" during the Wenchuan earthquake became synonymous with government corruption and corner-cutting in local development.[3] In June, the cover-up of the rape and murder of a 16-year-old girl by the son of a prominent local official incited mass protests and the torching of the city's Communist Party headquarters and some 40 police cars in Weng'an, Guizhou.[4] And in July, the addition of melamine to infant formula resulted in the deaths of six babies and the hospitalisation of 54,000 others, implicating 22 private companies and a host of government officials.[5] The incident triggered an immediate scandal at home and abroad and was decried as "deplorable" by the WHO, resulting in a public apology and criticism of lax business ethics from then-Premier Wen Jiabao 温家宝.[6]

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[1] Cull, 'The Public Diplomacy of the Modern Olympic Games and China's Soft Power Strategy'; deLisle, '"One World, Different Dreams"'; Price and Dayan, *Owning the Olympics*; Xu, *Olympic Dreams*; Manzenreiter, 'The Beijing Games in the Western Imagination of China'.

[2] Yan, 'The Good Samaritan's New Trouble'; Osnos, 'China's Bystander Effect'; Minter, 'China's Infamous "Good Samaritan" Case Gets a New Ending'.

[3] Sorace, 'Be Grateful to the Party! How to Behave in the Aftermath of a Disaster'; Buckley, 'China Quake School Toll Stirs Grim Findings and Anger'.

[4] Fewsmith, 'An "Anger-Venting" Mass Incident Catches the Attention of China's Leadership'; Scoggins, *Policing China*; Liu, 'Mobile Communication, Popular Protests and Citizenship in China'.

[5] Liu, 'Profits Above the Law'; Branigan, 'China Executes Two for Tainted Milk Scandal'.

[6] Where Chinese names appear for the first time in this thesis, I will give both the Chinese characters and pinyin romanisation, resorting to only the latter for subsequent mentions. I use simplified Chinese script (简体字) throughout, including for names and phrases that pre-date the language reforms of the People's Republic of China. This is done for the sake of consistency only, rather than as a value judgement.

Throughout the 1990s and 2000s, incidents such as these were invoked as evidence of a nation in crisis.[7] Party apparatchiks blamed a variety of factors: An immature regulatory system unable to contain the excesses of market-based self-interest; the collapse of public morality in the face of changing social structures; and a brittle political ideology unfit to address the "spiritual vacuum" (精神真空) of the post-Mao world. This thesis tells of the Chinese Communist Party's (CCP, or 'Party'[8]) search for a solution to these problems. The Party's instinct has been to seek a technological fix, mobilising its long-held belief in the revolutionary potential of information to effect radical change. This is the story of how one such tool – the "social credit system" (社会信用体系) – was created. It charts the borrowing and balancing of a huge variety of competing influences, the messiness of building data infrastructures across large-scale bureaucracies, and the process of reform in response to public criticism and the shifting political priorities of the system's architects. Ultimately, it is a story about the pursuit of a new "Chinese-style modernisation" through informatisation as the Party – like its contemporaries around the world – looks to navigate the challenges of the 21st century.

IN TECHNOLOGY WE TRUST

Sociological explanations for China's state of crisis have centred on the great social upheaval of the country's 20th century. In the years immediately after 1949, China, like many other pre-modern, largely agrarian states, was characterised by social connections based first on 'kith and kin' and then around the cradle-to-grave organising power of the *danwei* (单位) work unit system; a "society of familiars" (熟人社会), where consanguinity, geographic immobility and CCP-mandated forms of social organisation acted as the primary mediators of public, political and moral life.[9] The dismantling of the caste-like structures of socialist hierarchy during China's "Reform and Opening Up" (改革开放), however, introduced and

[7] For literature on the emergence of China's 'moral crisis' in the post-Mao era, see Yan, 'The Politics of Moral Crisis in Contemporary China'; Ci, 'The Moral Crisis in Post-Mao China'; Ci, *Moral China in the Age of Reform*; He, *Social Ethics in a Changing China*; Kleinman et al., *Deep China*; Zhang, Kleinman, and Tu, *Governance of Life in Chinese Moral Experience*; Lee, *The Stranger and the Chinese Moral Imagination*.

[8] The translation and abbreviation of the Chinese term '中国共产党' to either Chinese Communist Party (CCP) or Communist Party of China (CPC) has in recent times become somewhat politically charged, despite the fact that the Chinese government's own terminology is consistently inconsistent on the matter. I choose to use CCP, though seek to make no value judgement in so doing. For more information, see Kilpatrick, 'CCP or CPC'.

[9] China's most famous anthropologist, Fei Xiaotong 费孝通, famously talked of Chinese people as coming from the earth, their social relationships with others based predominantly on familiarity. See Fei, *From the Soil*. For further studies on the sociological transition of pre-modern to modern societies, see Fukuyama, *Trust*; Seabright, *The Company of Strangers: A Natural History of Economic Life*.

encouraged an increasing individualism.[10] The private sector grew from nonexistence to accounting for more than two-thirds of GDP output, becoming the primary principle around which society was organised.[11] It offered individuals the alternative to work outside the state-controlled economy in a largely unregulated domain in which relative wealth began to define a widening array of lifestyles and choices. Newfound mobility saw hundreds of millions of migrant workers seek their fortunes ever further afield.[12] This nascent market competition and social mobility encouraged – forced even – the individual to be proactive, rational, self-interested and competitive, with the "pursuit of profit" (趋利) and personal consumption repositioned as the preeminent signifier of social success.

The economic growth this period heralded, however, came at a cost. Coupled with a legal and regulatory system still in its early stages of post-Mao development, marketplace malfeasance in the form of counterfeit products, petty fraud, tainted medicine and food scandals became commonplace.[13] An explosion in the country's manufacturing base necessitated ever longer and more complex supply chains. Poor contract enforcement saw corporate fraud reach endemic levels. Official corruption flourished;[14] as did the public's awareness of it, amplified by the closest thing the country ever had to a tabloid press.[15] Rapid urbanisation fuelled by a floating population of transient workers fostered a sense of "stranger danger" that eroded social cohesion and contributed to a culture of mass hysteria.[16] Liberalisation brought with it a drive for instant gratification and resurgent moral vices such as prostitution, drugs and human trafficking.[17] Collectively, these issues converged into what Chinese scholars and politicians alike have defined as a "moral crisis" (道德危机) in which a critical mass of the country's population failed to comply with norms and rules of social coexistence and cooperation, despite finding these rules more or less acceptable.[18] A crisis of whom to trust and what to believe set in, compounding over time as distrust begot further distrust.

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[10] Social anthropologist Yan Yunxiang has published extensively on the increasing importance of the individual in Chinese society. See Yan, *The Individualization of Chinese Society*; Yan, 'The Changing Moral Landscape'; Yan, 'Old and New Moralities in Changing China'.

[11] For literature on China's economic transformation, see Naughton, *Growing Out of the Plan*; Naughton, *The Chinese Economy*; Huang, *Capitalism with Chinese Characteristics*; Shirk, *The Political Logic of Economic Reform in China*; deLisle and Goldstein, *To Get Rich Is Glorious*.

[12] Solinger, *Contesting Citizenship in Urban China*; Wang, *Social Media in Industrial China*; Pai, *Scattered Sand*.

[13] For literature on the challenges to developing China's legal system post-Mao, see Lubman, *Bird in a Cage*; Liu, 'Cage for the Birds'; Diamant, Lubman, and O'Brien, *Engaging the Law in China*; Sapio et al., *Justice*.

[14] Ang, *China's Gilded Age*; Shum, *Red Roulette*.

[15] For literature on the liberalisation of Chinese media and its relationship to state power, see Stockmann, *Media Commercialization and Authoritarian Rule in China*; Brady, *Marketing Dictatorship*; Repnikova, *Media Politics in China*. For representations of corruption in popular culture, see Barmé, *In the Red*; Kinkley, *Corruption and Realism in Late Socialist China*. For the role of the media in the "mass supervision" of Party officials, see Andreas and Dong, '"Mass Supervision" and the Bureaucratization of Governance in China'.

[16] Lee, *The Stranger and the Chinese Moral Imagination*.

[17] For a fascinating study of petty crime in contemporary China, see Bakken, *Crime and the Chinese Dream*. Also see Zheng, *Red Lights*; Liu, *Passage to Manhood*; Ransmeier, *Sold People*.

[18] Ci, *Moral China in the Age of Reform*.

China has not been alone in battling this trust crisis. Classical sociologists from Simmel to Tönnies, Weber and Durkheim through to more contemporary thinkers such as Giddens and Beck have all linked the question of modernity to a decline in trust across society.[19] [20] This matters, because trust matters; all systems, human or artificial, require some level of trust to function.[21] Social theorists tend to conceive of trust by pointing to the range of benefits that it provides; it is seen as essential for stable relationships, vital for the maintenance of economic activity and necessary for even the most routine of everyday interactions.[22] As Niklas Luhmann puts it, "without trust only very simple forms of human cooperation which can be transacted on the spot are possible, and even individual action is much too sensitive to disruption to be capable of being planned, without trust, beyond the immediately assured moment".[23] Sociologists see trust as a valued and scarce resource with the power to soften the atomistic individualism of modern society. Economists argue for a need to minimise trust in persons and confide instead in institutions in order to sustain modern market economies and their complex division of labour.[24] Pushing back against an assumption of rationalised self-interest, other research argues that trust and cooperation are inherent to human biology.[25] Under all definitions, trust is no longer seen purely as a human trait but as a public good, one required in order to maintain social order and enact policy. Its production and preservation are deeply connected with questions of modernity, legitimacy and power across political systems. The quest for its creation has, in Adam Seligman's estimation, been the primary occupation of modern, Western societies for the past two hundred years.[26]

Information technologies have played a crucial role in this pursuit of institutionalised trust across history. Proto-reputational systems have been shown to have facilitated long-distance medieval trade throughout Europe and North Africa.[27] The conversion of local reputations into easily-readable and -reproducible summaries of trustworthiness in the form of ledgers and later credit ratings was a key driver in the marketisation of first the British Empire and then the American economy through its Gilded Age.[28] Over the last 20 years, tech-enabled peer-to-peer ratings and reputation systems have fuelled the rise of the sharing

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[19] For a good summary of sociological discourse on trust, see Mistzal, *Trust in Modern Societies*.

[20] These narratives are global. Studies have shown that show that people in at least 60 nations around the world believe that morality is declining, that they have believed this for at least 70 years and that they attribute this decline both to the decreasing morality of individuals as they age and to the decreasing morality of successive generations. Recent research also shows, however, that these perceptions are often an illusion. See Mastroianni and Gilbert, 'The Illusion of Moral Decline'.

[21] Taddeo, 'Trusting Digital Technologies Correctly'.

[22] Giddens, *The Constitution of Society*; Barber, *The Logic and Limits of Trust*; Sztompka, *Trust.*

[23] Luhmann, *Trust and Power*.

[24] North, *Institutions, Institutional Change and Economic Performance*.

[25] Benckler, *The Penguin and the Leviathan*; Churchland, *Braintrust.*

[26] Seligman, *The Problem of Trust.*

[27] Greif, 'Reputation and Coalitions in Medieval Trade'; Ellickson, *Order without Law*; Bernstein, 'Opting out of the Legal System'.

[28] Lauer, *Creditworthy*; Bouk, *How Our Days Became Numbered*; Olegario, *The Engine of Enterprise*; Muldrew, *The Economy of Obligation*.

economy and ecommerce, allowing for economic cooperation in even the darkest and most decentralised corners of the internet.[29] In recent years, blockchain technologies have promised new architectures of trust, underpinning everything from cryptocurrencies, to the sharing of medical data, to new forms of artistic production and ownership.[30] Technology's perceived objectivity has fostered trust in systems, their participants and their creators.[31]

This thesis is, in the first instance, about technology, the process through which it is created and how governments have envisioned its use in achieving structural reform in society. Technology – defined here as the sum of any techniques, knowledge, rules and tools, tangible or otherwise, applied in the pursuit of a given objective – is being increasingly incorporated into governance around the world.[32] In the information era, the introduction of new hardware, the digitisation of existing systems, the collection of vast swathes of data and the application of machine learning are all changing the ways in which governments see, arrange and think about their populations.[33] What makes contemporary societies work depends increasingly on bits rather than atoms.[34] In an American and European context, much of this shift has been driven by a corporatist trend in public administration over the last half century, rooted in flawed concepts of Taylorist "scientific management".[35] Private-sector management techniques have found a home in regimes across the political spectrum.[36] In a democratic context, the application of private-sector management techniques to politics and government is rooted in a push for greater transparency, efficiency and performance encapsulated under the catch-all term 'neoliberalism'.[37] Data are generated and exchanged between public and private actors to intervene more intrusively in social management for the purpose of greater control. Mass experimentation and behavioural nudging have become commonplace in policymaking as part of a trend towards

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[29] Dellarocas, 'The Digitization of Word of Mouth'; Diekmann et al., 'Reputation Formation and the Evolution of Cooperation in Anonymous Online Markets'; Sclavounis and Lehdonvirta, 'Dark Net Markets Grow Up'.

[30] For early optimism on the promise of the blockchain, see Werbach, *The Blockchain and the New Architecture of Trust*. At the time of writing, blockchain's promise had yet to materialise, with the collapse of multiple cryptocurrency exchanges, NFT markets, and various metaverse ventures underscoring the fragility of this particular "trust-making" technology.

[31] Porter, *Trust in Numbers*.

[32] For a critical history of the concept and definitions of technology, see Schatzberg, *Technology*.

[33] Fourcade and Gordon, 'Learning Like a State'; Mann, 'The Autonomous Power of the State'; Fountain, *Building the Virtual State*; Gilardi, *Digital Technology, Politics, and Policy-Making*.

[34] Floridi, 'Infraethics'.

[35] Dennis Tourish highlights methodological flaws in the work of Frederick Taylor, originator of the concept of "scientific management". One much-cited study, for example, collected interview data from just five employees, two of whom were replaced when their answers were deemed unsatisfactory by researchers. Tourish cites a recent survey of management studies literature to find that 70 per cent of papers contain too little data to allow for independent verification. See Tourish, *Management Studies in Crisis*; The Economist, 'Too Much Management Research Is Clear as Mud'.

[36] Taylorism's popularity among Western neoliberal policymakers is well known; among Nazi and Soviet planners, less so. See Link, *Forging Global Fordism*. For the influence of Fordism and other private-sector principles on the early PRC, see Werner, 'Global Fordism in 1950s Urban China'.

[37] Porter, *Trust in Numbers*; Lepore, *If Then*; Crouch, *The Knowledge Corrupters*. For an intellectual history of neoliberalism, see Bockman, *Markets in the Name of Socialism*.

libertarian paternalism, driven by a fundamental – though problematic – belief in technological solutionism.[38] One primary goal of this shift has been to engender self-awareness at the individual level of one's standing in society – sometimes referred to as the "quantified self" – with the goal of encouraging reflexive management and ultimately optimisation.[39] Categorisation, ratings and ranking systems have been central to this.[40] Beyond ecommerce and the sharing economy, efforts to institutionalise trust are being applied in an ever wider variety of contexts, including academia, healthcare and government, giving rise to an "ordinal society" of "informational persons".[41]

This drive to build trust, transparency and efficiency through technology is creating new ways to mediate the moral order. As Steffen Mau argues, the language of numbers and ranking are changing our everyday notions of value and social status, fostering ubiquitous competition and generating new social hierarchies that transform qualitative differences into quantitative inequalities.[42] Luciano Floridi describes this shift in the role of information technologies as the development of ethical infrastructure, or "infraethics", the platforms or structures of social norms, expectations and rules that facilitate or hinder the moral or immoral behaviour of the agents involved.[43] Infraethics play a vital role in both encouraging and regulating the human interactions that constitute any complex society, comparable in importance to the physical infrastructures in economics. This study is in part an exploration of the desire to build tech-enabled ethical infrastructures and the consequences thereof.

This view of information as an enabler of radical change in not just economic, but social and moral organisation builds on high modernist visions – both utopian and dystopian – of future states transformed by technologies that have persisted not only since the arrival of the internet, but indeed throughout history.[44] This thesis takes the position that developments in the application of information technologies represent *evolutionary* change, rooted in – and impossible to divorce from – political and social history, ideology and culture, while simultaneously acknowledging the potential *revolutionary* impact such advances can have in advancing governing capacity.[45] As I will describe in Chapters One and Two, the

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[38] Few books have had more impact on this trend, for better or worse, than Thaler and Sunstein, *Nudge*. For a critical assessment of technological solutionism, see Morozov, *To Save Everything, Click Here*; Rosner, *The Technological Fix*.

[39] Farrell and Fourcade, 'The Moral Economy of High-Tech Modernism'; Bröckling, *The Entrepreneurial Self*; Lupton, *The Quantified Self*.

[40] Bowker and Star, *Sorting Things Out*; Masum and Tovey, *The Reputation Society*.

[41] Fourcade and Healy, *The Ordinal Society*; Koopman, *How We Became Our Data*; Newfield, Alexandrova, and John, *Limits of the Numerical*.

[42] Mau, *The Metric Society*; Farrell and Fourcade, 'The Moral Economy of High-Tech Modernism'.

[43] Floridi, 'Infraethics'.

[44] Many prominent scholars have argued that the rapid uptake in digital technologies coupled with their unique properties and effects are evidence of a distinct 'post-industrial' 'network society'. See Bell, *The Coming Of Post-Industrial Society*; Castells, *The Rise of the Network Society*. For a historical perspective, see Edgerton, *The Shock of the Old*; Zhou, *Historicizing Online Politics*.

[45] For an overview of the primary theories of technology and its socio-political potential, see Schroeder, *Social Theory after the Internet*; Webster, *Theories of the Information Society*.

view of the CCP is much more technologically optimistic in its vision for the role and potential of information communication technologies (ICTs).

A core focus of this study will be to show that technology is not only the product of technical work, but also of social and political negotiations.[46] Technologies are created through a non-linear process of mutual shaping and conditioning. The concept of mutual shaping is a critique of technologically and socially deterministic perspectives that have dominated much of the academic discourse in the field of technology studies, including of digital China.[47] Deterministic views isolate either technological or human actors from other elements involved in the process of governance, establishing a causal linear relationship between the intrinsic qualities of a specific actor and the outcome observed. Proponents of mutual shaping theory point out that every stage in the design, development and use of technology involves social choices. These choices are not always conscious decisions and can depend on a wide range of technological and social factors, which in turn co-shape the outcomes of a technology itself. By extension, the application of those technologies is limited by the affordances of their design, creating further non-linear feedback loops. This mode of policy- and technology-making, reliant on a variety of actors in negotiation with each other, is one of the key strengths of what Manuel Castells terms "networked governance".[48]

To recognise the presence of multiple actors in the creation of technologies is also to acknowledge that these technologies are not neutral, but rather bound to the national, historical and cultural contexts from which these actors originate.[49] Rather than escaping these contexts, technologies and the social and organisational relationships around them are deployed in order to strengthen particular configurations of power, a phenomenon termed "technopolitics".[50] This thesis will contribute to a rich field of literature that collectively explores the intersection of technological and political visions in a range of national settings.[51] Specifically, in this study I will look beyond examples rooted in the Euro-American tradition to consider the technopolitics of China.

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[46] For classic works on the nexus of social, cultural and political influences on the formation of technology, see MacKenzie, *Inventing Accuracy*; Winner, *The Whale and the Reactor*; Feenburg, *Questioning Technology*.

[47] Yang, 'Technology and Its Contents'; Guan, 'The "Authoritarian Determinism" and Reductionisms in China-Focused Political Communication Studies'.

[48] Castells, *Communication Power*.

[49] Kranzberg, 'Technology and History'.

[50] I found the works of Gabrielle Hecht and Eden Medina particularly useful in understanding the concept of technopolitics and their relevance to the case of China. See Hecht, *Entangled Geographies*; Medina, *Cybernetic Revolutionaries*.

[51] For studies on France, see Hecht, *Entangled Geographies*; Alder, *Engineering the Revolution*. On Egypt, see Mitchell, *Rule of Experts*. On Chile, see Medina, *Cybernetic Revolutionaries*. On Ethiopia, see Gagliardone, *The Politics of Technology in Africa*. On the USSR, see Gerovitch, *From Newspeak to Cyberspeak*; Rindzevičiūtė, *The Will to Predict*. On the USA, see Edwards, *The Closed World*.

PATCHING THE CHINESE LEVIATHAN

In so doing, this thesis is also about the practice of Chinese governance and the state's vision for the role of technology within its reform programme.

Much of the English-language literature on Chinese governance is dominated by a focus on the importance of institutions in the creation and maintenance of power. A narrative of "authoritarian resilience" attributes the longevity of the CCP post-Tiananmen to its ability to rehabilitate and institutionalise itself, absorbing internal and external shocks along the way.[52] Under a model of what some have termed "consultative authoritarianism", informal institutions matter as much as their formal counterparts in the overall configuration of continued CCP power, with a wealth of studies showing that grassroots civil society organisations are as likely to strengthen the state's coercive capacity as they are to incentivise the provision of public goods.[53] Much of this literature is based on an assumption that the desire to "institutionalise, standardise and proceduralise" (制度化、规范化、程序化) has supplanted the strongman politics of a bygone era, seizing on Xi Jinping's 习近平 apparent admiration for the bureaucratic legacy of Mao's great antagonist, Liu Shaoqi 刘少奇.[54] [55] More recent scholarship by Joseph Fewsmith disputes this somewhat, crediting the resilience of the post-Mao CCP not to its institutionalisation, but rather a more nuanced, complex system of checks and balances maintained between competing bureaucracies and factions.[56] In this view, while institution-building matters for state capacity, the primacy of the Party and its ideological "leadership over everything" (领导一切) makes the institutionalisation of governance and law not only undesirable but impossible.[57]

A growing body of literature places greater emphasis on practice and process in Chinese policymaking. The aim here is to explore new mentalities of governance that decentre the "problem of the state" – the impulse to characterise the wielding of power as the actions of a coherent and calculating political subject hellbent on a teleological desire to

[52] The narrative of authoritarian resilience began with Nathan, 'China's Changing of the Guard'. For a more recent discussion of the theory's applicability today, see Fewsmith and Nathan, 'Authoritarian Resilience Revisited'.

[53] Teets, 'Let Many Civil Societies Bloom'; Teets, *Civil Society under Authoritarianism*; Truex, 'Consultative Authoritarianism and Its Limits'; Mittelstaedt, 'Rebuilding Authority'; He and Thøgersen, 'Giving the People a Voice?'

[54] This triplet of priorities has appeared in numerous reform and rule of law-building plans since 2012. See Central Committee, 'Decision of the CCP Central Committee on Several Major Issues Concerning Comprehensively Deepening Reform'; Central Committee and State Council, 'Implementation Outline for the Construction of a Government under the Rule of Law (2021-2025)'.

[55] Walder, 'Back to the Future?'; The Economist, 'Why Xi Jinping Is Not Another Chairman Mao'.

[56] Fewsmith, *Rethinking Chinese Politics*.

[57] Smith, 'On the Informal Rules of the Chinese Communist Party'; Thornton, 'Party All the Time'.

stay in office.[58] [59] Instead, this body of work acknowledges the diversity of forces that shape the regulation of society, arguing that vertical, centralised governance is but one – and not even the most important – form of coercive power. A wealth of studies have collectively illustrated the integrative nature of state-society relations in China, promoting a non-linear perspective on governing practice.[60] Elizabeth Perry and Sebastian Heilmann have demonstrated not only the existence of a space for interpretation and resistance among peripheral actors in the practice of "adaptive governance", but the importance of such space in the pursuit of policy innovation.[61] A wide and complex nexus of actors, including cadres and administrators, grassroots organisations, private businesses, civil society and citizens themselves form what Vivienne Shue and Patricia Thornton have called a "braided river" of interlaced governing patterns, mutually dependent and mutually shaping.[62] In their view, the study of institutional structures ought to be conjoined with the processes that simultaneously "animate, supplement or sidestep them".

China's post-Tiananmen era has been characterised by the introduction of more complex, diffuse and immersive modes of governance, not necessarily replacing but supplementing more hierarchical and regulated systems of formal authority. In more recent years, this evolution has been underscored by a shift in rhetoric from the "management" (管理) of society to its "governance" (治理), based on "co-construction, co-governance and co-sharing".[63] Imported tools and techniques have played an important role in the coordination of the "braided river", fusing with traditional socialist creed in the service of what Frank Pieke terms "neo-socialism".[64] In his view, neo-socialism represents something that is more than just the sum of its parts, an old-fashioned Leninist Party-state putting new technology to familiar use. Rather, it is the application of innovative, neo-liberal technologies, both foreign and home-grown, to the heart of China's state-building project, supporting, centralising, modernising and strengthening the Party's leading role in society in the process. This tech-enabled shift is about relaxing the government's grip over the minutiae of day-to-day social and economic organisation, thus allowing for the greater individualisation and marketisation that have fuelled China's rise, but without compromising on the Party's omniscience and omnipresence on matters of politics, ideology and morality.

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[58] Many scholars have applied Foucauldian concept of biopolitics and mentalities of governance to context of China; for a collection of such studies, see Bray and Jeffreys, *New Mentalities of Government in China*.

[59] For more on the problems of "authoritarian teleology", see Ding, 'What Do I Mean by "Authoritarian Teleology"?'

[60] Ang, *How China Escaped the Poverty Trap*; Hsu, Tsai, and Chang, *Evolutionary Governance in China: State–Society Relations under Authoritarianism*; Duara, *Culture, Power, and the State*; Rowe, 'The Problem of "Civil Society" in Late Imperial China'; Huang, 'Rethinking "the Third Sphere"'; Shue, *The Reach of the State*; Rankin, 'Some Observations on a Chinese Public Sphere'.

[61] Heilmann and Perry, *Mao's Invisible Hand*.

[62] Shue and Thornton, *To Govern China*.

[63] Snape, 'Social Management of Social Governance'.

[64] Pieke, *The Good Communist*.

Perhaps the most significant – or at least well-documented – dynamic within the "braided river" of policy creation is the hierarchical but multidirectional relationship between China's central and local bureaucracies.[65] The CCP is inheritor to a dilemma that has challenged generations of Chinese rulers, namely how to govern effectively over a large, diverse and dispersed population.[66] As a Leninist state – and taking inspiration from the Soviet Union – its instinct has been to compartmentalise authority.[67] Resulting inefficiencies in governance are permitted – encouraged even – as a trade-off for the ability to prevent different interest groups coalescing across state or society in a way that might pose a threat to the central leadership. This "fragmented" authoritarian model breaks down governing responsibilities into ever smaller organisational units, arranging them vertically along so-called *tiao* (条) of departmental leadership, as well as horizontally within a *kuai* (块) of local decision-making.[68] This web of authority is repeated across every department and every tier of government nationwide (see Chapter Four, Figure 17). Directives – variegated by importance – ripple out from the centre as a way of retooling the system in light of new policy requirements.[69] Officials in charge of local or departmental organisational units are then forced to compete "tournament-style" against each other for career progression against a range of criteria.[70] In more recent years, these cadre evaluations have become increasingly quantified and professionalised.[71] Such assessments help to foster ideological loyalty as well as to redeploy and refocus local officials on new policy priorities.[72] They also

[65] For classic works on central-local relations in China's post-1949 bureaucracy, see Schurmann, *Ideology and Organization in Communist China*; Lieberthal and Oksenberg, *Policy Making in China*; Lieberthal, *Governing China*; Harding, *Organizing China*. For a more recent but equally powerful study, see Zhou, *The Logic of Governance in China*.

[66] For studies on bureaucracy and state-making in imperial China, see Wang, *The Rise and Fall of Imperial China*; Huang, *1587 A Year of No Significance*; McKnight, *Village and Bureaucracy in Southern Sung China*; Hartman, *Structures of Governance in Song Dynasty China, 960–1279 CE*.

[67] Landry, *Decentralized Authoritarianism in China*; Xu, 'The Fundamental Institutions of China's Reforms and Development'; Ahlers and Schubert, 'Effective Policy Implementation in China's Local State'. For more on Soviet bureaucracy and central-local relations, see Hough, *The Soviet Prefects*; Gregory, *Restructuring the Soviet Economic Bureaucracy*.

[68] Put simply, the director of the Suzhou Municipal Bureau of Transport receives their directives vertically from both the Jiangsu provincial department (who in turn is instructed by the central ministry), as well as horizontally from the Suzhou municipal government. See Mertha, 'China's "Soft" Centralization'; Chung, *Centrifugal Empire*.

[69] Yuen Yuen Ang has identified three politically salient 'colours' of directive: grey (ambiguous about what can or cannot be done), black (clearly states what can be done) and red (clearly states what cannot be done). Grey directives encourage flexible policy implementation and experimentation, black ones strongly endorse and thereby scale up selected initiatives, while red ones forbid certain actions. See Ang, 'Ambiguity and Clarity in China's Adaptive Policy Communication'. See also Birney, 'Decentralization and Veiled Corruption Under China's "Rule of Mandates"'.

[70] Zhou et al., 'A Behavioral Model of "Muddling Through" in the Chinese Bureaucracy'; Edin, 'State Capacity and Local Agent Control in China'; Kung, Cai, and Sun, 'Rural Cadres and Governance in China'.

[71] Wallace, *Seeking Truth and Hiding Facts*; Zhuang, 'Supervising Local Cadres in China'; Zuo, 'Promoting City Leaders'.

[72] Ang, 'Ambiguity and Clarity in China's Adaptive Policy Communication'; Ottervik, Wang, and Li, 'Operational Dilemmas and Cadre Education and Training at a County Party School in China'; Göbel and Heberer, 'The Policy Innovation Imperative'.

allow for a system of experimentation in which "top-level designs" (顶层设计) – centrally-drafted policies, often in the form of "guiding opinions" (领导意见) – are trialled in a series of parallel pilots on the hunt for policy best practice.[73] At the same time, the compartmentalisation of these experiments isolates any negative fallout should things go awry, protecting, for the most part, higher-ups from public – and therefore political – criticism.[74] This fragmentation and delegation of authority has proved a core tenet of China's development since the Reform Era, delivering policies as diverse as food safety and railway building.[75]

There are, however, also significant drawbacks to China's central-local system of political organisation. It has, for example, in spite of its primary function as partitioner of power, on occasion contributed to an incubation of "territorial cliques" (地方派系), with local officials at times able to amass significant personal wealth and authority.[76] Additionally, the compartmentalisation of policymaking necessarily leads to bureaucratic overlaps and inefficiencies. This in turn can lead to localised bargaining and rent-seeking behaviour; China's fragmented model has proved a breeding ground for official corruption, with obvious negative implications for public trust in government, albeit that such frustrations are primarily limited to the local level.[77] Furthermore, compartmentalisation-by-design makes interjurisdictional cooperation difficult, even within the same province. "Local protectionism" (地方保护主义) leads to policy implementation gaps, exacerbated by principal-agent dynamics and the zero-sum nature of cadre promotions.[78] Even where officials do seek to collaborate, the siloed nature of localised policy development leads to misalignments in both technical and legal standards that can prohibit interoperability.[79] Taken in sum, these features-turned-bugs in the system have consistently undermined the state's ability to govern inherently complex or transregional issues such as public security, finance, the environment, and public health.[80] In light of this, successive central governments have sought to reform its relationship with local administrations.[81] Under Xi Jinping, a string

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[73] Schubert and Alpermann, 'Studying the Chinese Policy Process in the Era of "Top-Level Design"'; Heffer and Schubert, 'Policy Experimentation under Pressure in Contemporary China'.

[74] O'Brien and Li, *Rightful Resistance in Rural China*.

[75] Oi, 'The Role of the Local State in China's Transitional Economy'; Montinola, Qian, and Weingast, 'Federalism, Chinese Style'; Heilmann, *Red Swan*; Ma, *Localized Bargaining*; Ang, *How China Escaped the Poverty Trap*.

[76] Bulman and Jaros, 'Localism in Retreat?'

[77] Pei, *China's Crony Capitalism: The Dynamics of Regime Decay*; Ang, *China's Gilded Age*.

[78] O'Brien and Li, 'Selective Policy Implementation in Rural China'; Zhou, 'The Institutional Logic of Collusion among Local Governments in China'. The competitive nature of cadre "tournaments" has had the adverse effect of leaving some 6,000km of "broken roads" at the intersection of competing jurisdictions, as prefectural officials prioritise investment in transportation links that won't also benefit neighbouring localities. See Jiang, Eaton, and Kostka, 'No County Is an Island'. Other officials have been shown to strategically pollute their neighbour's waterways. See Cai, Chen, and Gong, 'Polluting Thy Neighbor'.

[79] Chen and Greitens, 'Information Capacity and Social Order'; Große-Bley and Kostka, 'Big Data Dreams and Reality in Shenzhen'.

[80] Yasuda, 'Explaining Policy Failure in China'.

[81] Lupher, *Power Restructuring In China And Russia*; Mertha, 'China's "Soft" Centralization'.

of policies have attempted to standardise and stabilise central-local dynamics, including bureaucratic streamlining, changes to cadre evaluations and increasing regional integration in local governance.[82] This thesis provides a case study of central-local relations in practice, highlighting their potential as a site for innovation (Chapter Three), contention (Chapter Four) and reform (Chapter Five).

Seeing Like a Smart State

At the same time as acknowledging the fragmented nature of Chinese governing practice, it is vital not to ignore the intrinsic importance of central ideology in organisation and law-making.[83] The same ideologically-Leninist instinct to compartmentalise, monitor and micro-manage society has over the course of the last 70 years fused with advances in technology that allow the state to do so with ever greater precision.

This has, above all else, been an exercise in pervasive surveillance. Indeed, beyond the grand flourishes of statehood and violence with which the CCP is historically synonymous, it would be fair to characterise much of China's post-1949 governance as an exercise in apparent banality – a relentless endeavour to count and classify its people, land and output.[84] This, of course, is not unique to China. Anthony Giddens characterises heightened, routine surveillance as essential to effective social organisation as societies become more modern and disembedded.[85] Indeed, since the early 19th century, the desire to quantify and categorise the natural and social world has formed the bedrock of modern state-making.[86] Governments need to 'know' their populations in order to arrange them; to quote James Scott, "legibility is a condition of manipulation".[87] In a Leninist context, surveillance is of course partly – perhaps predominantly – about control.[88] Ideologically, however, it is also driven by an ambition to get 'closer to the people'. Left-leaning administrations the world over have carried out programmes of "mass observation" to better understand their populations and more effectively allocate resources for radical social change.[89]

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[82] Walder, 'Back to the Future?'; Ding and Thompson-Brusstar, 'The Anti-Bureaucratic Ghost in China's Bureaucratic Machine'; Jiang, Eaton, and Kostka, 'No County Is an Island'; Bulman and Jaros, 'Localism in Retreat?'

[83] For an edited collection of studies on this subject, see Creemers and Trevaskes, *Law and the Party in China*.

[84] Ghosh, *Making It Count*; Bréard, 'Statistics'.

[85] Giddens, *The Constitution of Society*.

[86] Desrosières, *The Politics of Large Numbers: A History of Statistical Reasoning*; Porter, *Trust in Numbers*; Hacking, *The Taming of Chance*.

[87] Scott, *Seeing Like a State*; Hurst, 'Reflecting Upon James Scott's Seeing Like a State'.

[88] Jowitt, *New World Disorder*; Gueorguiev, *Retrofitting Leninism*; Dimitrov, *Dictatorship and Information*.

[89] In the UK, my hometown of Bolton was the subject of one such initiative. Researchers were despatched in the 1930s to document life among the working classes and develop a "science of ourselves". They recorded the minutiae of daily life, from hand gestures, to the proportion of black to brown shoes, to the cost of a portion of chips. Its findings fed into the Beveridge Report that formed Britain's welfare state, including the National Health Service. See Jones, 'Mass Observation 75 Years On'; Hall, *Worktown*.

In the view of the CCP, however, technology is more than just a set of tools or techniques for better management of both the population and resources. It is the key to a "scientific objectivity" (科学客观) that views all aspects of the universe as knowable and changeable.[90] Society is regarded as a machine; its constituent cogs and components can be observed, predicted and optimised by an elite technocratic class of engineers. Chapter One charts the development of this vision for technology from pre-revolution to the present day, highlighting the myriad influences, foreign and domestic, that went into its formation, from Norbert Wiener and Alvin Toffler, to Qian Xuesen 钱学森 and Zhao Ziyang 赵紫阳. During this period, cybernetics – the science of control and communication in complex systems – proved highly impactful.[91] Its chief proponents, often drawing on research conducted as part of China's nuclear programme, were responsible for some of the government's most far-reaching and controversial social experiments.[92] More consequentially, they cultivated a deep-held belief in the need for "new technological revolution", overhauling not only industry, agriculture and the military, but also the state's ability to better see and arrange society. In so doing, it was their belief that information technology would allow China to break free from the structural chains of its current developmental stage and achieve leapfrog growth.[93]

Absolutely central to this new intellectual tide was a mindset that saw technology as consisting of both hardware as well as human software, with the goal of not just achieving material but also spiritual outcomes for the nation.[94] This juxtaposition crystallised in the post-Mao years, as Deng Xiaoping 邓小平 reassured the Party's conservative old guard that the country's opening to market forces would not pre-empt wholesale political reform. With echoes of 19th century debates on the value of Chinese "essence" (体) against Western "usefulness" (用), Deng's ideological acrobatics were characteristic of an age-old balancing and rebalancing of competing voices and technologies in the construction of China's national project, whether red vs expert, foreign vs domestic, or black cats vs white cats.[95]

Beginning the in the 1990s, these post-Mao trends converged into a strand of "neo-authoritarian" (新权威主义) Chinese political thought that has since come to dominate the

[90] Kwok, *Scientism in Chinese Thought, 1900-1950*; Hua, *Scientism and Humanism*; Wang, *The End of the Revolution*; Gueorguiev, *Retrofitting Leninism*.

[91] As it had done in other socialist contexts. See Gerovitch, *From Newspeak to Cyberspeak*; Peters, *How Not to Network a Nation*; Medina, *Cybernetic Revolutionaries*. For more on theories of society as "complex adaptive system", see Miller and Page, *Complex Adaptive Systems*; Lansing and Cox, *Islands of Order*.

[92] Greenhalgh, 'Missile Science, Population Science'.

[93] For a fascinating recent study on the intersection of nationalism, high modernism and techno-fetishism in contemporary Chinese political ideology, see Lei, *The Gilded Cage*.

[94] Bakken, *The Exemplary Society*.

[95] Deng has been characterised as, above-all-else, a pragmatist, famously saying "I do not care if a cat is black or white, so long as it catches mice."

country's ideological landscape.[96] Neo-authoritarianism emphasises the need for a powerful central state guided by a benevolent dictatorship, to serve as facilitator for economic liberalisation. Above all else, it advocates for a gradualist approach to market and political reform as an alternative to the "shock therapy" adopted so disastrously in numerous post-socialist states.[97] Its ideological origins are often associated with Wu Jiaxiang 吴稼祥 and other close advisors to Premier Zhao Ziyang.[98] Its longitudinal development, however, is most closely linked with the career of Wang Huning 王沪宁, arguably one of China's most influential political thinkers from the last three decades and – as I will show in this thesis – central to the social credit story.[99] Deeply influenced by American neo-con writers such as Samuel Huntington, neo-authoritarianism posited that cultural and ideological integrity and strength were equally as important to nation-building as material development. Wu, Wang and their contemporaries saw the post-Mao transition from political and social utopianism to nihilism and then hedonism as the root cause of China's snowballing crises that cumulatively threatened all-important stability.[100] They believed that cultural cultivation would be an essential component of any political project to achieve national strength. Crucially, it would serve as a key to not only stability and thereby security, but also as a resource that could be mobilised in the execution of a radical political agenda. This Maoist voluntarism spurred countless campaigns and legal reforms throughout the 1990s and 2000s, culminating with a renewed moral agenda under the auspices of the "socialist core values" that centred the pursuit of "trustworthiness", or *chengxin* (诚信) as one of 12 ideals to be embedded across the country's governance system.[101]

This desire to engineer and then harness social morality evolved from a belief in human malleability. Rooted in Marxist historical materialism, the concept assumes that humankind is at once changeable and perfectible. It minimises the innate differences between individuals and instead emphasises their plasticity; under the right conditions, anyone can be moulded into anything in the service of the nation.[102] Citizens, in this case, are not 'born' but 'made'.[103] This fundamental conviction in the ability to socially engineer public morality is not new; indeed it has formed the cornerstone of China's state-making mantra across multiple

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[96] Sautman, 'Sirens of the Strongman'; Feng, 'Order and Stability in Social Transition'; Perry, 'China in 1992'; Yun, 'The Rise and Fall of Neo-Authoritarianism in China'; Dongen, 'Goodbye Radicalism!'

[97] Weber, *How China Escaped Shock Therapy*.

[98] The China Story, 'Wu Jiaxiang'.

[99] Johnson, 'Wang Huning, "Cultural Expansion and Cultural Sovereignty"'; Lyons, 'The Triumph and Terror of Wang Huning'; Che, 'How a Book About America's History Foretold China's Future'.

[100] Ci, *Dialectic of the Chinese Revolution*.

[101] Gow, 'The Core Socialist Values of the Chinese Dream'; Kubat, 'Morality as Legitimacy under Xi Jinping'; Creemers and Trevaskes, *Law and the Party in China*.

[102] Munro, 'The Malleability of Man in Chinese Marxism'; Papagianneas, 'Smart Governance in China's Political-Legal System'.

[103] Gow, 'The Core Socialist Values of the Chinese Dream'; Kilpatrick, 'The People'. This also applies from a legal perspective; citizens are not seen to have fundamental legal rights in the Chinese system, but contextually-driven entitlements that can be withdrawn at the whim of the Party. See Creemers, 'The Privilege of Speech and New Media'.

generations of government.[104] Rooted in a long imperial tradition of virtue-based rule, as Patricia Thornton argues, state-formation in China has always concentrated on an effort to define successive administrations – including the CCP – as *the* moral agent authorised to set and enforce normative visions.[105] Western theories of statehood presume a monopoly of power produces legitimacy; in Thornton's view, it is in fact the monopoly of legitimacy that produces power. The belief in human malleability requires not only that government leads by example, but that it seeks to actively shape its population through propaganda and the creation of disciplinary technologies. Throughout the late imperial period, a variety of ways of recognising and rewarding moral conduct in everyday life were introduced.[106] These behaviours were updated, rationalised, homogenised and bifurcated using modern tools in the early 1900s as part of the revolutionary attempt to create national citizens.[107] Fusing with Marxist theories of materialism, the CCP inherited this drive to achieve legitimacy through the improvement of *suzhi* (素质) – or "human quality" – in the creation of what Børge Bakken terms an "exemplary society".[108]

Technological development has radically increased the state's capacity to achieve its goals, both material and spiritual. Just as elsewhere in the world, "informatisation" (信息化) – the process of introducing ICTs into all corners of public and private processes and administration in the pursuit of an "information society" – has become the driving logic of Chinese governance against a backdrop of technological optimism and solutionism (see Chapter One). In recent years, ICT-based advances have converged with the longer-term trends towards diffuse and decentralised administration mentioned above to create an impetus for "smart governance" (智治).[109] This drive has seen sophisticated technologies, big data and artificial intelligence combined to automate aspects of public administration as China prepares to face the challenges of the 21st century. Already, sensors passively collect data used in the monitoring and control of pollution levels.[110] Facial – and even emotional – recognition software is applied in the surveillance of urban populations.[111] Ubiquitous health codes formed a key component of China's technological response to COVID-19.[112] An increasingly digitised court system is reducing legal bureaucracy and even automating some

[104] Gloria Davies describes "patriotic worrying" about the moral obligations of identifying and solving perceived "Chinese problems" – social, political, cultural, historical, or economic – in order to achieve national perfection as an intellectual mandate passed down through generations of Chinese state-making. See Davies, *Worrying About China*.

[105] Thornton, *Disciplining the State*.

[106] Brokaw, *The Ledgers of Merit and Demerit*; Elvin, 'Female Virtue and the State in China'; Elvin, 'Who Was Responsible for the Weather?'

[107] Harrison, *China: Inventing the Nation*.

[108] Bakken, *The Exemplary Society*.

[109] Creemers, Papagianneas, and Knight, *The Emergence of China's Smart State*.

[110] Tarantino, 'Navigating a Datascape'; Kostka and Zhang, 'Tightening the Grip'.

[111] Article 19, 'Emotional Entanglement'.

[112] Liu, 'Seeing Like a State, Enacting Like an Algorithm'; Yu and Zeuthen, 'Local Politics in the Age of Automated Decision-Making in China'.

judicial decisions.[113] And blockchain technologies are being introduced into all corners of economic governance.[114] At the local level, these technologies are being integrated to create "smart cities" in the quest for new "modes of urbanisation" in which a private economy of artificial intelligence products is being applied in the resolution of complex urban governance issues.[115] Emerging evidence from the Xinjiang Autonomous Region illustrates the carceral potential of such systems when deployed in the service of policies of oppression.[116]

"Smart governance" is more than just a question of tools, data and standards, however. It encapsulates a much more holistic vision of the role that technology can play in fostering structural change in and with society. It is positioned as a cornerstone of a renewed push for the "modernisation of governance capacity" since 2019, itself positioned as the fifth addition to Deng's "four modernisations" that launched China's "new technological revolution" (see Chapter One). Viewed against this backdrop, China's "smart state" is not just about upgrading the practical functions of government, but about the application of new tools and techniques to reach deeper into society in the pursuit of the CCP's broader political goals. In this thesis, I explore how the incorporation of technology into governance creates new departures, challenges and tensions, re-networking the ways that the state sees and organises both itself and its citizenry.

Enter the Social Credit System

In this study, I will explore the technopolitical visions and realities of the CCP by analysing how a variety of stakeholders have imagined and implemented one particular iteration of the nation's "smart state", the social credit system. I will also ask what implications that system has for contemporary Chinese governance practices, as well as its broader impact on our understanding of technology in public administration.

What is social credit? Put as simply as possible, it concerns the CCP's attempt to improve "trustworthiness" through technological means. Its precise definition has, however, evolved significantly over the last two decades. Research on the subject first began in the late 1990s at the Chinese Academy of Social Sciences (CASS), receiving its first high-level political mention in 2002 as part of outgoing Secretary General Jiang Zemin's 江泽民 report to the 16th Party Congress.[117] In its earliest iteration, the primary focus of social credit was to resolve escalating issues of marketplace malfeasance (see Chapter Two). Spiralling cases of fraud, counterfeiting and debt defaulting of the kind described at the start of this chapter posed – in the minds of many senior economists and policymakers at the time – an existential threat to China's still-marketising economy. Social credit would serve a dual role

[113] Papagianneas, 'Towards Smarter and Fairer Justice?'
[114] Ning, Ramirez, and Khuntia, 'Blockchain-Enabled Government Efficiency and Impartiality'.
[115] Noesselt, 'City Brains and Smart Urbanization'.
[116] Leibold, 'Surveillance in China's Xinjiang Region'; Byler, 'In the Camps'.
[117] Jiang Zemin, 'Full text of Comrade Jiang Zemin's Report to at the CCP 16th National Congress'.

in first stabilising market activity as a tool for regulatory enforcement and in so doing mitigate risk, minimise transaction costs, encourage competitive lending practices and ultimately stimulate economic growth. Drawing heavily on inspiration from overseas credit-based economies, its core principle was a simple one; centralised records of past behaviour can serve as a predictor of future risk, with those marked as uncreditworthy incentivised to correct their behaviours promptly or – preferably – avoid possible infringements altogether.

In practical terms, the social credit system consists of four major components, each of which are mirrored in national and local administrations (see Chapter Three). First, at a technical level, "public credit information" (公共信用信息) databases built and operated by a sub-division of the National Development and Reform Commission (NDRC) gather, process, store and distribute relevant information on individuals and businesses. These databases are coupled with the second core component of the system, its public interface. The majority of information stored in social credit databases is accessible either through public portals, or through integrated credit checks, enabling individuals, businesses and local administrators to check a potential business partner, employer or borrower before engaging with them. Local governments, ministries and private companies have been encouraged to build their own applications and interfaces for such information.

The third aspect of social credit is its black-listing system. Social credit black-lists (黑名单) form perhaps the most pervasive and fundamental component of the system overall, underpinning its very guiding logic. In their earliest design, black-lists consisted of names and organisations that had defaulted on loans or engaged in other forms of economically "untrustworthy", or *shixin* (失信), behaviour. Each participating government department or locality maintains its own black-lists, uploading new entries to the central public credit information network. Social credit's fourth core component concerns the treatment of these black-listed entities through "joint punishment" (联合惩戒). Since 2013, a web of memoranda-of-understanding (MoUs) have laid the groundwork for cross-jurisdictional sanctions, wherein black-listed actors find themselves subject to restrictions not only in the context of their original offence, but across all walks of economic life. For example, a business found guilty of causing a minor food safety issue may find itself unable to access finance, government contracts or planning approvals. This logic is best summed up by the ubiquitous social credit slogan, "those deemed untrustworthy in one area shall be restricted everywhere" (一处失信，处处受限).

From its very inception, however, the search for a uniquely Chinese theory of credit beyond its "narrow" (狭隘) financial definition has preoccupied many of social credit's chief architects (see Chapter Two). Over the years, a wide variety of actors and institutions have guided the system's development and execution. From a theoretical perspective, its planners have blended foreign ideas and methods with domestic political priorities as a response to specific governance challenges and shifting ideologies, with a range of government departments infusing the system with their own policy needs. In the early 2010s, social

credit's financial remit expanded to include trust-building across not just the market, but the judiciary, government and society. Collectively, these became known as the "four general areas" (四大领域) of social credit, constituting a new "broad" (广大) definition of the technology.

The formal starting gun for social credit development and implementation was fired in June 2014 with the publication of the State Council's *Planning Outline for the Construction of a Social Credit System 2014-2020*. In this foundational text we see a reflection of some of the theoretical debates that went into the imagination of the system, as well as some of its inherent features:

> The social credit system is an important component of both the socialist market economy and social governance systems. It is founded on laws, regulations, standards and charters, and is based on a complete network covering the credit records of members of society and credit infrastructure. It is supported by the lawful application of credit information and a credit services system with the inherent requirement of establishing a culture of trust to carry forward trustworthiness and traditional virtues. It uses rewards to keep trust and punishments against breaking trust as incentive mechanisms, with the overall objective of raising a mentality of trustworthiness and credit levels across the whole of society.[118]

In this opening paragraph alone, we can observe that social credit concerns both economic management, as well as social control; it is underpinned by the law, but also seeks to elevate morality; it is state-led, but relies on private service providers for elements of its implementation; and at its core, it aims to encourage and discourage certain behaviours through the development of data-driven infrastructures.

This describes a credit system whose scope is in many ways unparalleled anywhere in the world, expanding reputation-driven techniques to navigate a wide range of regulatory challenges.[119] Elsewhere, social credit has been framed as a "great practice of improving the national governance system" and "an unprecedented reform of the model for management of both the economy and society".[120] Its centrality to the CCP's broader reform agenda should not be underestimated (see Chapter Six).[121]

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[118] State Council, 'Planning Outline for the Construction of a Social Credit System (2014-2020)'.

[119] For studies on the reputational aspect of social credit as well as reputational shaming more broadly in Chinese regulation, see Dai, 'Toward a Reputation State'; von Blomberg and Yu, 'Shaming the Untrustworthy and Paths to Relief in China's Social Credit System'; Chen and Cheung, 'The Transparent Self Under Big Data Profiling'; Men Zhongjing, 'The Stigma of Joint Punishments for Untrustworthiness and its Legal Limits'; Wang Ruixue, 'The Current State of Reputational Sanctions and the Construction of the Rule of Law'.

[120] Guan Jianzhong, *Blueprint for the Construction of China's Credit System*.

[121] Knight, 'Basket Case'.

Yet while social credit is arguably without comparison internationally, it has not evolved in a vacuum and is the product of at least four converging trends in Chinese governance over recent decades (see Figure 1). In its original conception, social credit owes its core technological underpinning to the influence of "new institutional economics" (NIE) and its emphasis on the power of information to institutionalise trust between market actors and facilitate economic activity without overt state intervention. Right from the offset, the system's key architects recognised its potential beyond the purely financial, expanding its application to cover the regulation of both market and wider society as part of a push for greater "rule of law" (法治). Their specific focus was trained on the perennial issue of "difficult to enforce" (执行难) judicial decisions that continued to drag on the country's economic growth well into the 2000s. As the concept of "rule of law" itself began to evolve to encompass a wider moral-legal agenda in Xi Jinping's New Era, so too did the use of social credit. The neo-authoritarianism of central Party ideology outlined above called for a strengthening of Chinese culture and morality as counterbalance to the country's economic hedonism. Permeating all three of these trends, the social credit system is above all else an example of the CCP's fundamental belief in the power of ICTs to effect radical structural change in society, a techno-fetishism that pervades all manner of policies. In Chapters One and Two, I describe the evolution and integration of these various patterns into a cohesive logic of social credit.

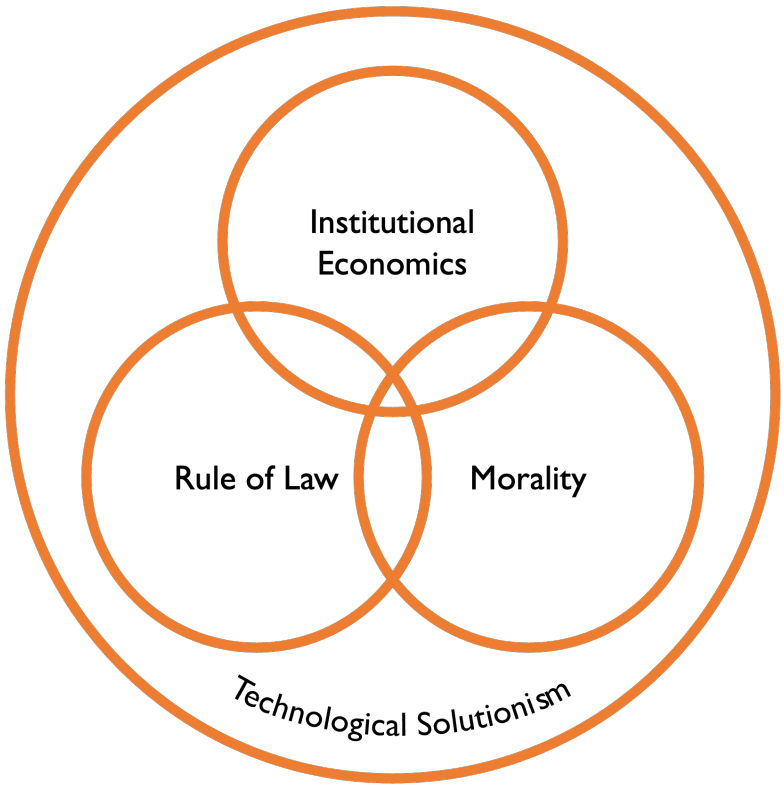

Figure 1: Genealogy of the social credit system

As emphasised by the literature on Chinese policymaking process and practice described above, the technopolitical vision for social credit's potential has often clashed with the realities of implementation. Relying on localised experimentation, the iterative nature of social credit's roll-out has led to a hotch-potch of different schemes at wildly unequal stages of development. In addition to centrally-administered systems, hundreds of local schemes have emerged since 2014, each vying for acknowledgement by their superiors at the provincial and national level. Four sets of model pilot cities have been published since 2016 – most recently in August 2023 – with case studies of successful implementation circulated and then emulated across the country (see Chapter Three). Each of these systems maintains its own sets of black-lists. Within certain parameters, they have until recently been able to determine what behaviours should and shouldn't be included in the system, how data should be collected and stored, and what punishments – or even rewards – should be applied. These lists are then (sometimes, but not always) shared with other localities through a web of MoUs and provincial-level data-sharing agreements and technical interfaces. This fragmentation of the system has led to a bewildering array of social credit applications in response to specific, often localised governance challenges (see Chapter Four). It is no exaggeration to describe social credit as a system of sub-systems, arranged in a honeycomb-like pattern of siloes. Differing technical standards and practices have caused no end of problems when it comes to its integration at the regional or national level.

The expansion of these local schemes has generated significant tension between the original architects of the system and subsequent interest groups who have, in their eyes, "hijacked" (绑架) the technology for, at times, clashing purposes. At the very least, social credit is seen – they argue – as a "big basket" (大箩筐) into which lazy local officials throw the governance challenge *du jour* so as to avoid the more arduous task of passing actual legislation. At worst, the expansion of social credit is seen as a threat to China's nascent rule of law project, undermining public confidence in due process and posing a real cybersecurity risk. An increasingly vocal media and academic counter-discourse has for many years publicly questioned the direction that social credit is heading in (see Chapter Five).

This growing clamour for reform has not gone unnoticed. Since 2020, the central government has embarked on a series of efforts to centralise and standardise social credit policy and technology. The goal here has been to reign in the most extreme excesses of social credit at its fringes, while re-articulating the central government's vision for the scope and role of social credit moving forward, culminating in the publication of a draft *Law for the Construction of a Social Credit System* in November 2022. As the system undergoes these reforms, what is clear is that social credit has passed through its experimental phase and is set to form a core component of how China's smart state is conceived of and constructed. Its core tenets of record-keeping, rating and ranking have evolved into the principle of "new credit-based supervision mechanisms", announced in 2019 and found in an increasingly wide variety of policy initiatives beyond social credit's traditional scope (see Chapter Six).

Anglophone studies on social credit have grown in number in recent years, owed in part to significant – though often problematic – media coverage of the topic.[122] A significant strand of this literature is rooted in the framework of "authoritarian resilience" and questions of whether big-data enabled projects such as social credit will strengthen or weaken the CCP's control over society.[123] A limited number of empirical studies have been carried out to-date, mostly based on survey data to show levels of public awareness and acceptance of social credit.[124] Similarly, a handful of case study-based projects have illuminated specific applications of the system on-the-ground within local model schemes.[125] The regulatory goals of the system have received significant attention, its moral applications less so.[126] A handful of wider studies have explored the development of the system from a macro-level.[127] Others have looked to situate social credit in a comparative perspective.[128] While some work has been completed on the system's origins, this has been limited to highlighting historical parallels such as the *jiaku* and *dang'an* systems of personnel files rather than a comprehensive analysis of social credit's genealogy and the myriad sources of inspiration that went into its creation.[129] This speaks to a broader gap in the social credit literature; a general lack of engagement with Chinese-language sources and concepts. While many studies cite government documents and regulations, few have explored the debates and processes that have shaped their creation. Even fewer have traced the life cycle of these governance technologies, from inception to implementation, exploring how the structural legacies of Party organisation impact the roll-out of policy ideas.

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[122] Even hugely popular and important books such as Zuboff, *The Age of Surveillance Capitalism* contain poorly-researched sections on social credit, perpetuating many of the myths that have been debunked over several years. See Daum, 'China Through a Glass, Darkly'; Brussee, 'China's Social Credit Score – Untangling Myth from Reality'.

[123] Hoffman, 'Social Credit : Technology-Enhanced Authoritarian Control with Global Consequences'; Zeng, 'China's Date with Big Data'; Chen and Cheung, 'The Transparent Self Under Big Data Profiling'; Liang et al., 'Constructing a Data-Driven Society'.

[124] Xu, Kostka, and Cao, 'Information Control and Public Support for Social Credit Systems in China'; Kostka, 'China's Social Credit Systems and Public Opinion'; Liu, 'Who Supports Expanding Surveillance?'

[125] Knight, 'Technologies of Risk and Discipline in China's Social Credit System'; Liu, 'Multiple Social Credit Systems in China'; Tsai, Wang, and Lin, 'Hobbling Big Brother'; Li and Kostka, 'Accepting but Not Engaging with It'.

[126] For studies on black-listing and social credit's regulatory potential, see von Blomberg and Yu, 'Shaming the Untrustworthy and Paths to Relief in China's Social Credit System'; Trauth-Goik and Liu, 'Black or Fifty Shades of Grey?'; Engelmann et al., 'Blacklists and Redlists in the Chinese Social Credit System'. For studies on social credit and moral governance, see Engelmann et al., 'Clear Sanctions, Vague Rewards'; Chen, Engelmann, and Grossklags, 'Ordinary People as Moral Heroes and Foes'; Wang et al., 'Envisioning a Credit Society'.

[127] Creemers, 'China's Social Credit System'; Zhang, 'Governing (through) Trustworthiness'; Chen and Cheung, 'The Transparent Self Under Big Data Profiling'; Brussee, *Social Credit: The Warring States of China's Emerging Data Empire*.

[128] Mac Síthigh and Siems, 'The Chinese Social Credit System: A Model for Other Countries?'; Schroeder, 'Aadhaar and the Social Credit System'; Infantino and Wang, 'Challenging Western Legal Orientalism'.

[129] Jiang, 'A Brief Prehistory of China's Social Credit System'.

THE THESIS

In this thesis, I will address these gaps in the literature through a comprehensive exploration of the social credit system, its conception, construction and consequences. I will highlight the historical and ideological legacies that have shaped its design, while simultaneously mapping the processes and actors that have animated its implementation. I will dismantle portrayals of the system as a singular, uniform institution, focusing instead on the competing objectives and processes of negotiation that have typified its technopolitical creation. I will situate social credit within China's broader reform agenda, arguing that the technological visions of the "smart state" cannot be divorced from the political visions of the CCP. The two have evolved in tandem; one cannot fully understand one without the other.

In so doing, I will seek to answer the following research questions: How does the case of China enhance our understanding of how governance technologies are made? How are political goals embedded in the design of technical systems? Further to this, how does studying technology and its creation enhance our understanding of CCP governance reform? How has the Party envisioned the role of information technology in bringing about structural change in society?

The title for this thesis is derived from a quote by Lenin. It means to rely only on what has been institutionalised and is reference to the CCP's instinct for leadership and control over everything. As I will return to in Chapter Six, new governance mechanisms – such as the trust generated by social credit – are desirable only in so far as the Party maintains the ability to steer their application in the service of political goals.

Structure

In considering the questions above, this thesis is structured around six chapters across three core sections covering the *imagination*, *implementation* and *implications* of the social credit system, with each chapter in turn divided into three sub-sections.

Imagination. The first section charts the evolution of social credit thought. In Chapter One, I provide a comprehensive history of the Chinese state's vision for technology in the pursuit of its political goals. Tracing developments from the Republication Era to the present day, I show how successive administrations have grappled with technology's role in modernisation. The state's relationship with technology has not always been straightforward. Since the 1980s, however, the drive for "new technological revolution" has bred a deterministic view of technology's potential as harbinger of radical change. Informatisation has become central to an upgrading of CCP governance capacity. In Chapter Two, I turn to social credit specifically, exploring the full gamut of its theoretical roots. Beginning with its origins in imported NIE principles, before its expansion into the wider regulation of society and morality, I document the wide variety of inputs that converged in the drafting of a singular social credit *Planning Outline* in 2014. Together, both chapters

demonstrate the myriad influences and contradictions that have gone into the imagination of social credit as a governing technology. The adoption and adaptation of foreign ideas to create context-specific solutions is not unique to social credit, yet the system provides a near-perfect example of this process in action. Drawing on policy documents, speeches and primary literature produced by key social credit thinkers from across the 1990s and 2000s, this section both asks and answers the simple question, "what were they thinking?"

Implementation. The second section examines social credit's roll-out post-2014. In Chapter Three, I describe the techno-legal process through which the social credit system has been constructed at the sub-national level. As highlighted above, compartmentalised policymaking allows for the comparatively quick rollout of nascent ideas, empowering officials to tinker according to local conditions in the search for innovation, all while shielding higher-ups from public criticism should such schemes fail or otherwise prove unpopular. Building on this approach to localised experimentation, I detail how provinces and municipalities have engaged in a process of testing, learning and legislating in the quest for "model" social credit status, leading to an explosion in the number of competing systems. In Chapter Four, I provide a detailed case study of localised piloting in action, documenting the implementation and innovation of social credit in Jiangsu province. Jiangsu has been at the forefront of social credit development since the early 2010s, producing numerous celebrated pilot schemes. The province has also led the way in its efforts to integrate social credit technology with the Party's broader moral agenda through the development of various city-level "credit points" schemes to reward or punish a range of activities. The case of Jiangsu will also serve to illustrate the messy reality of social credit's non-standardised fragmentation and the problems it creates when facing inherently trans-regional crises such as the COVID-19 pandemic. This section will build on the literature of public-private and central-local relations in China to illustrate the non-linearity of both policy- and technology-making. I draw on dozens of official documents and regulations to trace the web of legislation that makes up social credit's core structures. I also rely on a variety of indices and rankings produced by the central government to score and grade the performance of local systems, providing valuable insight into the question of "what does good look like?" in the eyes of the state.

Implications. The third section explores the reform and repercussions of social credit. In Chapter Five, I show how technical and legal flaws in the system have undermined its usefulness and overall legitimacy. A wide range of critiques have been met with a variety of tweaks over the years, from greater regional integration to the development of appeal mechanisms for the protection of individual rights. From 2020 onwards, calls for a fundamental overhaul of the system have resulted in a concerted effort to standardise and institutionalise its functions, signalling an end to the mass experimentation documented in section two. The Chapter concludes with a brief analysis of the 2022 draft *Social Credit Law* and some reflections on its purpose and timings. In Chapter Six, I consider "what next for social credit?". I begin with a look at developments in the system over the 12 months since the publication of the draft law and what these tell us about the future of the system itself. I

then consider the afterlives of social credit. With the formal system apparently winding down, what legacy will it leave behind? I reflect on social credit's achievements as well as the wider informational, organisational and legal developments it heralded. What learnings have the CCP taken from social credit's construction, and how will these continue to influence governance in years to come? I conclude with a brief return to the research questions posed above, reflecting on the broader implications of social credit on our understanding of both Chinese governance and the development of large-scale data infrastructures more generally. As in the previous two sections, Chapters Five and Six draw on a systematic literature review of Chinese-language scholarship and reporting on the topic, as well as dozens of central and local government documents and speeches.

Methods

This thesis relies predominantly on an analysis of the written word, drawing on close to 500 directly-cited Chinese-language sources – rules and regulations, policies and pronouncements, speeches, papers, theoretical treatises, media coverage and legal critiques – as well as countless additional documents consumed over the years on background. I gathered much of the academic and journalistic material referenced here through the techniques of 'systematic literature review' employed across a variety of Chinese-language platforms and databases. Official "blue books" (蓝皮书) and other annual reports – in particular those that contain scoring indices (see Chapter Three) – provided a useful supplement to legal texts, giving insight into how the central state has graded the work of local administrations. Similarly, the monthly "China Credit" (中国信用) magazine released by the NDRC's publishing arm proved hugely valuable as a source of central thinking on social credit development.[130] For up-to-date news on social credit developments, I owe a debt of gratitude to a variety of WeChat public accounts, most notably "Yuandian Credit" (源点信用).

When it came to the collection of government documents, I relied on a purposefully unstructured approach. Much of the research on the governing structures and sub-structures that make up the social credit system as described in Chapters Three and Four was a venture into uncharted territory, an exercise in identifying the 'unknown unknowns'. This necessitated a 'grounded' mindset, in which the gathering of data and sources is considered a process of discovery rather than the verification of preconceived hypotheses.[131] In practice, this entailed the snowball sampling of relevant documents, with one discovery breeding several new lines of enquiry, some illuminating, others complicating. Over time, on a source-by-source basis, a macro view of social credit's web-like regulatory and organisational structures emerged. This approach differs from other forms of documentary analysis that tend to prioritise either generalisations or comparisons across a

[130] Catalogue of PDF editions available here https://www.creditchina.gov.cn/xinyongkanwu/zazhi/index.html

[131] Glaser and Strauss, *Discovery of Grounded Theory*.

corpus of texts, increasingly through computational methods. Instead, it requires close-reading at scale coupled with meticulous cross-referencing. As Vivienne Shue has put it, scholars must constantly perform a series of conscious juxtapositions, maintaining a deliberate double vision, that at once sees both the minutest detail and the most grandiose design.[132] This is not always an enjoyable task. Renowned sinologist Simon Leys once wrote that "reading Communist literature is akin to munching rhinoceros sausage, or to swallowing sawdust by the bucketful".[133] Deciphering meaning requires not only linguistic fluency but political astuteness, not to mention perseverance.[134] Leys' quote continues:

> While subjecting himself [sic] to this punishment, the analyst cannot allow his attention to wander, or his mind to become numb; he must keep his wits sharp and keen; with the eye of an eagle that can spot a lone rabbit in the middle of a desert, he must scan the arid wastes of the small print in the pages of the People's Daily, and pounce upon those rare items of significance that lie buried under mountains of clichés. He must know how to milk substance and meaning out of flaccid speeches, hollow slogans, and fanciful statistics; he must scavenge for needles in Himalayan-size haystacks; he must combine the nose of a hunting hound, the concentration and patience of an angler, and the intuition and encyclopaedic knowledge of a Sherlock Holmes.

In terms of theory, I have consciously refrained from the temptation to erect grandiose frameworks with a view to testing or extending our understanding of the great questions of social science. I do of course recognise the usefulness of such theories in sifting and sorting the vast body of literature to which my own paltry contribution owes its existence. Instead, however, I again adopt a diffuse, 'grounded' position that encourages researchers to "shop for existing theories and concepts before and after heading to the field, but not to buy too much of what we find".[135] To my mind, this non-denominational approach makes clear sense in the study of social credit in particular, given it is precisely how the system's own architects have addressed its creation, borrowing concepts and tools – imported and indigenous – from the fields of sociology, economics, law, philosophy and political science among others. To fully empathise with the complex process of social credit construction requires a similarly curious inter-disciplinary mindset.

Limitations

This is not the doctoral project I set out to write. The research proposal submitted as part of my PhD application detailed plans for 12 months of extensive fieldwork on-the-ground

[132] Shue, *The Reach of the State*.

[133] Leys, 'The Art of Interpreting Nonexistent Inscriptions Written in Invisible Ink on a Blank Page'.

[134] Schoenhals, *Doing Things with Words in Chinese Politics*.

[135] O'Brien, 'Discovery, Research (Re)Design, and Theory Building'.

across a number of social credit pilot cities, an extension to a similar project I completed in Rongcheng in 2018.[136] Matriculating in October 2019, the ensuing pandemic had other plans, however, and I, like all area studies students, found myself having to recalibrate to a world without travel to the field. With China's borders finally reopened, I was fortunate to have the opportunity to visit the country twice in 2023. While it was too late to use the time for any substantive research, these trips did allow me to hold informal meetings with many of the scholarly voices featured in this thesis, sense-checking the assumptions and assertions put forward as part of my argument.

It is worth reflecting on the fact that even if I had been able to travel, I am not wholly convinced that the kind of research project I initially proposed would have been actually possible to complete. Conducting fieldwork in China has always been fraught with challenges, both practical and ethical.[137] In recent years, however, many foreign academics have reported a backwards slide in terms of access and safety.[138] While it is difficult to divorce these developments from the increased geopolitical animosity and suspicion of foreigners seen during COVID-19, many scholars would, I believe, agree that this downward spiral was already in-motion pre-2020. Even access to the online research space has closed off while writing this thesis.[139] The ethics of using human informants is well-documented; the ethics of using open-source texts less so. Journalists have reported a whack-a-mole response by the Chinese state to reporting based on sensitive yet publicly available materials – for example, procurement documents detailing expansions to surveillance systems – restricting access to entire departmental or local government websites in a bid to prevent further coverage.[140] In an attempt to mitigate against the risk of this inverse Streisand effect, I have created archive versions of each of the Chinese government documents cited in this thesis.[141]

The renewed requirement for China-watching from afar is forcing scholars and reporters to reassess the value of documents over spoken testimony in the production of qualitative research.[142] As I argue above, there is great benefit in using documentary analysis and close reading to understand the structures of governance. In only relying on such

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[136] Knight, 'Technologies of Risk and Discipline in China's Social Credit System'.

[137] Alpermann, 'Ethics in Social Science Research on China'; Glasius et al., *Research, Ethics and Risk in the Authoritarian Field*; Barmé, 'In a Retro Mood'.

[138] Tan, 'Doing Fieldwork in China During and Beyond the Covid-19 Pandemic'; Baum and Ma, 'China Studies in an Uncertain Age'.

[139] Killing, 'The Challenges of Conducting Open Source Research on China'.

[140] In October 2020, ChinaFile published an analysis of 76,000 government procurement notices related to the construction of China's surveillance system. Inconsistencies in the dataset led the researchers to conclude that it was likely that officials retrospectively deleted some notices after they were written about in foreign news reports. See https://www.chinafile.com/methodology

[141] I have no reason to believe that any of the material I have analysed here comes close to being deemed sensitive in the eyes of the Chinese state. Goalposts do move, however, and caution is prudent.

[142] In December 2023, the CIA's in-house journal on intelligence gathering explicitly called for a reappraisal of methodologies rooted in the humanities for the study of China. See Gilmour, 'The Enduring Importance of the Humanities in the Work of Intelligence'.

sources it is, of course, impossible to capture the full picture, however. Official documents contain an obvious bias in terms of what they report. As I will show in Chapter Three, there is also often a gap between what is said and done, particularly across multi-tiered systems of government. In this thesis, I have attempted to supplement these official narratives with, where possible, external critiques of the system. It should, however, also be recognised that these too fail to provide a complete image given the restrictions to China's public sphere, in particular across the media and academia. While Chapters Two and Five both feature extensive non-governmental voices, particularly within the legal studies community, public responses to social credit remain conspicuously absent from this study. Conscious of this limitation, I do not presume to offer a comprehensive snapshot of social credit in-action, nor do I apologise for providing a "mere description" of the system's statist visions as well as the reality of implementation from a governing standpoint.[143]

Positionality

By way of a conclusion to my introduction, it is important to reflect on my position as a researcher and the prejudice that might engender.[144] As a scholar working in a Euro-American context relying on primarily English-language secondary literature as foundation for my primary data-gathering, it is crucial to highlight common biases and preconceptions that have the potential to influence my framing of social credit, whether consciously or subconsciously. Here, I would like to recognise the influence that Ivan Franceschini and Nicholas Loubere have had on my way of thinking. Their work on *Global China as Method* has been central to my drive to identify and neutralise preconceived biases and frameworks in the pursuit of empirical integrity.

At the core of their work lies a critical analysis of the process of 'othering' that pervades political, media and popular discourse on China to this day. There exists, in their view, an underlying assumption of the country's inherent separation and difference: "Either implicitly or explicitly, China is often depicted as something that can be understood in isolation – an external force with the potential to impact the 'normal' functioning of things."[145] This instinct cuts across political and ideological spectrums framing positive, negative and ambivalent discussions on China. Franceschini and Loubere describe three competing frames rooted in this assumption of China as a separate 'Other'.

The first of these is an 'essentialism' that emphasises the existence of innate 'Chinese' attributes that separate the country's experience from others. This perspective has been

[143] Gerring, 'Mere Description'.

[144] As Edward Said so succinctly wrote, "No one has ever devised a method for detaching the scholar from the circumstances of life, from the fact of his involvement (conscious or unconscious) with a class, a set of beliefs, a social position, or from the mere activity of being a member of society"; Said, *Orientalism*.

[145] Franceschini and Loubere, 'Global China as Method'. This is a perspective echoed by David Shambaugh in his observation that 'China studies' is a borrowing field, drawing on a huge variety of subject areas and theories while rarely exporting new theories of global relevance. See Shambaugh, 'The Evolution of American Contemporary China Studies'.

cultivated by thinkers in the West and China alike, with domestic reformist voices invoking the country's "national character" (国民性) for at least a century. A common theme across this thesis is the perennial debate on the preservation of Chinese "essence" (体) while importing foreign tools. This framing carries strong racial overtones, but can just as easily be applied to the belief that fundamental differences between China's authoritarian system and liberal democracies preclude any meaningful comparative work. The title of Chapter Two hints at such framing with reference to the almost-ubiquitous phrase "with Chinese characteristics" (中国特色). This is not because I personally endorse a perpetuation of this narrative of Chinese 'otherness', but instead reflects the CCP's own language as well as the explicit aims of social credit's early theorists to develop a technology they believed to be unique.[146] Additionally, in Euro-American reporting, essentialist views of China tend to manifest in an assumption that anything the CCP does is necessarily 'bad' as part of some teleological desire to stay in power at all costs.[147] This determinism has fused with wider concerns about technology. China is positioned as the ground zero for the development and export of uniquely authoritarian technological developments. In the words of Benjamin Bratton, "in the West, China is now so deeply associated with technology that anxieties about technology are projected into anxieties about China, and to an extent vice versa".[148] The reality is that social credit did not evolve in a vacuum; it is the product of global technological trends, its parallels with other systems far stronger than its differences (see Chapters One and Six).

The second framework is a desire to 'change' China. This is rooted in a fundamental belief that greater engagement precedes greater assimilation with international systems and institutions, itself a legacy of a problematic, Kipling-esque crusade to make China more like 'us'. In the context of social credit, this framing often assumes an unenlightened Chinese population requires 'saving' from the terror of an Orwellian surveillance state. This perspective glosses over consistent survey findings that show high levels of public approval of social credit's various mechanisms, as well as overwhelming support for the government as a whole.[149] Such studies of public opinion in China have their flaws.[150] But this framing nevertheless mischaracterises the actual purpose of social credit. As I hope to show clearly throughout this thesis, the system is not a tool for public security, nor does it make widespread use of advanced technologies such as facial recognition, biometrics or machine learning seen elsewhere in China's smart state. Instead, it is an example of the kind of banal, "routine surveillance" described by Anthony Giddens and typical of all modern societies; an attempt to suffuse data-driven techniques across a wide range of governing practices to improve the efficiency and efficacy of public administration.[151] The CCP has many other

[146] Perry, 'Cultural Governance in Contemporary China'; Zhao, *A Nation-State by Construction*.
[147] Ding, 'What Do I Mean by "Authoritarian Teleology"?'
[148] Bratton, *The Revenge of the Real*. Cited in Franceschini and Loubere, 'Global China as Method'.
[149] Xu, Kostka, and Cao, 'Information Control and Public Support for Social Credit Systems in China'.
[150] Carter, Carter, and Schick, 'Do Chinese Citizens Conceal Opposition to the CCP in Surveys?'
[151] Giddens, *The Constitution of Society*.

tools at its disposal for the 'harder' forms of social control; these are not the focus of social credit, however, nor therefore of this thesis. This is of course not to say that social credit is unproblematic. In Chapter Five, I will feature a range of Chinese voices who question its legitimacy and privacy implications. In analysing the system, however, it is important to keep to the facts; negligent or bad-faith misrepresentations of social credit in Western media are regularly translated and circulated across Chinese news and social media as examples of foreign cluelessness.[152] More seriously, such portrayals are invoked as 'evidence' of Western bias, giving cover to state media to question the integrity of other aspects of reporting on issues such as Xinjiang and Hong Kong.

The third trend concerns a tendency to resort to 'whataboutism' in discussions of China. This frames any criticism of the country as hypocritical, countering negative portrayals with apparent parallels in an American or – to a lesser extent – European context, no matter how tenuous. Coverage of China's treatment of Muslim Uyghurs would, for example, be met with gotcha-style retorts that highlight the crimes of the American-led War on Terror; defenders of law enforcement in the Hong Kong protests point to police brutality in Europe and the US; criticism of mass surveillance elicits comparisons with the NSA's PRISM initiative revealed by Edward Snowden. In the case of social credit, it is easy to find parallels to its core technologies around the world. The risk in highlighting these as a kneejerk first response to the system's analysis is that it breeds false equivalencies and superficial summations that in turn blind the reader to actual commonalities conducive to effective comparative work. It is worth noting that 'whataboutism' flows both ways also. As geopolitical tensions rise, scholars who diligently try to cut through hyperbole and present fact-based analyses can find themselves labelled as 'soft' on China. The most extreme impact of such insincere argumentation is a chilling effect that fosters academic apathy and hinders empirical research.

In this thesis, I aim to reject all three of these analytical frameworks in the study of Chinese governance reform through technology. It is for you the reader to judge how successful I am – after all, these perspectives are all-but hardwired into much discussion on China and can be difficult to exorcise from both the literature and our own analysis.

[152] Wang Lu, 'What do Foreigners Think of the Social Credit System?'