NEXT GENERATION LAW:

DATA-DRIVEN GOVERNANCE AND ACCOUNTABILITY-BASED REGULATORY SYSTEMS IN THE WEST, AND SOCIAL CREDIT REGIMES IN CHINA

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ABSTRACT

Data-driven governance systems are transforming the regulatory landscape of both states and other governance institutions. Grounded in principles of accountability and embedded in incentive-based systems for reducing risk and managing behaviors through mechanisms of choice and markets, these governance systems may well reshape the way states and other governance organs are constituted and operate. This short essay has two objectives. The first is to examine the challenges that social credit, ratings or assessment systems pose for effective implementation. Social credit itself refers generally to a new mode of data-driven governance through which data analytics are used to create and operate algorithms that provide a basis for rewards and punishments for targeted behaviors. More specifically, social credit references the specific project of the Chinese state to create a

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comprehensive legal and regulatory mechanism grounded in data-driven metrics that they have named "social credit." To that end, Section II considers first the difficulties of separating the role of social credit as a set of techniques and as a means of advancing ideological principles and objectives in the context of Chinese efforts. The second is to consider the resonances of China's social credit initiatives in the West. Section III then examines some of the ways in which Western efforts at social credit institutions have sought to meet similar challenges. The section first explores the context of social credit systems in the West and its operationalization, principally in the private sphere and through the use of market mechanisms for behavior management. It then examines the way that social credit might be used in the West as a technique of governance and as a means of embedding international standards in domestic behavior. The essay concludes by suggesting that social credit represents the expression of new forms of governance that are possible only through the correct utilization of big data management. The shift in regulatory forms also point to significant shifts in the relationship between law, the state and government. Accountability regimes grounded in behavior standards enforced through data-driven analytics may well change the focus of public law from constitution and rule of law to analytics and algorithm.

I. INTRODUCTION

About a decade ago, when the attention of influential thinking about governance was occupied elsewhere,[1] one might have noted a curious development in the nature of the forms of governance and its objectives within Western liberal democracies in the form of surveillance.[2]

> Surveillance has morphed from an incident of governance to the basis of governance itself. It is both government (apparatus) and governmentality (its self-conception and complicity, the prisoner becomes his own keeper). In this sense, surveillance has become the new regulatory mechanism. And law is becoming its servant. And the state, either as the traditionally conceived apex of political order, or as the repository of large aggregations of power within an international state system, now serves as a (but not the) nexus point for the regulatory power of technique. It is in this sense that we can speak of the "death" of the "state" or the "rise" of a transnational political system, or the "death" of the public/private divide or even the construction of non-public autopoietic systems.[3]

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1. *See* Giulio Napolitano, *The Two Ways of Global Governance After the Financial Crisis: Multilateralism Versus Cooperation Among Governments*, 9 INT' J. CONST. L. 310, 310–339 (2011); *see also* Anthony Reyes, *The Financial Crisis Five Years Later: Response, Reform, and Progress in Charts*, U.S. DEPT OF TREAS. BLOG (Sept. 11, 2013), https://www.treasury.gov/connect/blog/Pages/The-Financial-Crisis-Five-Years-Later.aspx.

2. *See generally* SURVEILLANCE AND SECURITY: TECHNOLOGICAL POLITICS & POWER IN EVERYDAY LIFE (Torin Monahan ed., 2006).

3. Larry Catá Backer, *Global Panopticism:States, Corporations, and the Governance Effects of Monitoring Regimes*, 15 IND. J. GLOBAL LEGAL STUD. 101, 101–48 (2008).

Surveillance was especially potent in the context of the governance of enterprises,[4] and in the way that the state used its prosecutorial authority to coerce the adoption of systems of monitoring and reporting to avoid criminal prosecution.[5] These developments, one might think, had the potential to change significantly the relationship of the state to law, and of the character and role of law in the governing of states.[6] *Yet an initial consideration might have dismissed this trend as irrelevant to the development of the productive force of law and its system.* The phenomenon was not law; it had been the object of an abstract and remote elite political philosophy since the 1970s.[7] It appeared most valuable to the extent which one could pronounce this area "eccentric" rather than for any value where it counted—for tangible value for academics concerned about the collective intellectual movements in their field. Indeed, "it is debated whether this increase in scholarly attention for governance (purely) mirrors a rise in governance as a social phenomenon or (merely) indicates it is a fashionable research topic."[8] There were exceptions, certainly, but they were generally connected to the rise of the Internet and Internet culture.[9]

Still, changes appeared to signal a new era of management that would fuse the authority of public and private institutions in new and uncharted ways. The trend was especially evident in the governance of behavior traditionally beyond the reach of states—transnational economic activity.[10] There was a sense that the appropriate approach to the management of behavior (by states or private institutions) was increasingly centered on the ability of decision makers to deploy data within algorithms to develop finely tuned systems of reward and punishment, which would manage appropriate

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4.   Stone v. Ritter, 911 A.2d 362 (Del. 2006). The surveillance apparatus of reforms to the federal secures laws in the face of the scandals of the early 2000s were even more profound. *See, e.g.*, Larry Catá Backer, *Surveillance and Control: Privatizing and Nationalizing Corporate Monitoring After Sarbanes-Oxley,* 2004 MICH. ST. L. REV. 327 (2004); Lawrence A. Cunningham, *The Appeal and Limits of Internal Controls to Fight Fraud. Terrorism and Other Ills,* 291. CORP. L. 267 (2004). *But see* Donald C. Langevoort, *Internal Controls After Sarbanes-Oxley: Revisiting Corporate Law's 'Duty of Care as Responsibility for Systems,'* 31 J. CORP. L. 949 (2006) .

5.   *See generally* GEORGE J. TERWILLIGER, III & MATTHEW S. MINER, U.S. CHAMBER INST. FOR LEGAL REFORM, LEGAL LIMBO: SEEKING CLARITY IN HOW AND WHEN THE DEPARTMENT OF JUSTICE DECLINES TO PROSECUTE (2012), https://www.instituteforlegalreform.com/uploads/sites/1/Declinations Booklet.pdf.

6.   The relationship between the state and law, and on the character of law has already undergone profound change in the shadow of globalization. The writing is both rich and deep. *See, e.g.*, MICHAEL BYERS, CUSTOM, POWER AND THE POWER OF RULES 3–52 (1999); RICHARD FALK, PREDATORY GLOBALIZATION 9–80 (1999); STEPHEN D. KRASNER, SOVEREIGNTY 152–219 (1999); KENICHI OHMAE, THE END OF THE NATION-STATE: THE RISE OF REGIONAL ECONOMIES 79–141 (1996); ADAM WATSON, THE EVOLUTION OF INTERNATIONAL SOCIETY 265–319 (1992).

7.   MICHEL FOUCAULT, "SOCIETY MUST BE DEFENDED": LECTURES AT THE COLLÈGE DE FRANCE, 1975-1976 (Mauro Bertani and Alessandro Fontana, eds. David Macey trans., Picador 2003) (1997).

8.   Peter Mascini & Judith van Erp, *Regulatory Governance: Experimenting with New Roles and Instruments*, 35 Recht Der Werkelijkheid 3, 3–11 (2014).

9.   *See* LAWRENCE LESSIG, CODE VERSION 2.0 (2006); LANGDON WINNER, AUTONOMOUS TECHNOLOGY 323 (1977) ("New technologies are institutional structures within an evolving constitution that gives shape to a new polity, the technolopolis in which we do increasingly live.").

10.   *See generally* JOHN G. RUGGIE, JUST BUSINESS: MULTINATIONAL CORPORATIONS AND HUMAN RIGHTS (2013).

behavior, hold individuals accountable, and contribute to social development.[11] Due diligence and the construction and operation of monitoring systems to provide accountability through standards developed by law (or markets)[12] appeared to produce that blending of public and private—political and economic systems—that might overcome the difficulty of extending law and rule of law beyond the state.[13] An intuition emerged, especially among scholars, that "corporate human rights impunity needs to be addressed at a variety of jurisdictional levels—national, regional, transnational and international—by a variety of actors—states, international organizations, corporations and NGOs."[14] This fit comfortably into emerging notions of plural law, or transnational law and governance.[15]

Nonetheless, the governance techniques of business and the state, especially in the management of economic behaviors, suggested an increasingly important space for systems of discretionary decision-making built on data-algorithm-consequence models as long as these were deployed to further the command of law and the public policies of which law was an expression.[16] It was management that counted, perhaps more than law, and institutions that served principle through the management of market driven behaviors, not political institutions. Within this context, it appeared increasingly clear that rule of law was moving toward data-driven systems implemented through the development of compliance practices of individuals and enterprises and overseen by administrators exercising constrained decision-making authority for the public good.[17] Regulatory governance appeared to push institutions not toward law-based government but to accountability-based governance.[18] Accountability refocused government from the state, and law, to regulation and the metrics required to bring those subjects to standards to account. "Decentered approaches to

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11. *See generally* ROBERT J. SHILLER, MACRO MARKETS: CREATING INSTITUTIONS FOR MANAGING SOCIETY'S LARGEST ECONOMIC RISK (1993).

12. *See*, *e.g.*, LIANGRONG ZU, CORPORATE SOCIAL RESPONSIBILITY, CORPORATE RESTRUCTURING AND FIRM'S PERFORMANCE: EMPIRICAL EVIDENCE FROM CHINESE ENTERPRISES 47 (2009).

13. *See* JOHN RUGGIE, U.N. HUMAN RIGHTS COUNCIL, PROTECT, RESPECT, AND REMEDY: A FRAMEWORK FOR BUSINESS AND HUMAN RIGHTS, U.N. DOC. A/HRC/8/5 (Apr. 7, 2008); s*ee also* Kanishka Jayasuriya, *Globalization, Law, and the Transformation of Sovereignty: The Emergence of Global Regulatory Governance*, 6 IND. J. GLOBAL LEGAL STUD. 425 (1998).

14. PENELOPE SIMONS & AUDREY MACKLIN, THE GOVERNANCE GAP: EXTRACTIVE INDUSTRIES, HUMAN RIGHTS, AND THE HOME STATE ADVANTAGE 271 (2014).

15. *See*, *e.g.*, GRALF-PETER CALLIESS & PEER ZUMBANSEN, ROUGH CONSENSUS AND RUNNING CODE: A THEORY OF TRANSNATIONAL PRIVATE LAW (2010) (on transnational lawmaking and legal pluralism); *see also*, PAUL S. BERMAN, GLOBAL LEGAL PLURALISM: A JURISPRUDENCE OF LAW BEYOND BORDERS (2012).

16. *See*, *e.g.*, SIMONS AND MACKIN, *supra* note 14 at 178–271. (an especially potent idea in the management of human rights impacts of enterprises); *see also* SURYA DEVA, REGULATING CORPORATE HUMAN RIGHTS VIOLATIONS: HUMANIZING BUSINESS (2013).

17. *See* Larry Catá Backer, *Unpacking Accountability in Business and Human Rights: The Multinational Enterprise, the State, and the International Community, in* ACCOUNTABILITY AND INTERNATIONAL BUSINESS ORGANIZATIONS: PROVIDING JUSTICE FOR CORPORATE VIOLATIONS OF HUMAN RIGHTS, LABOR, AND ENVIRONMENTAL STANDARDS (Liesbeth Enneking, et al. eds., forthcoming 2019).

18. Colin Scott, *Regulation in the Age of Governance: The Rise of the Post-Regulatory State*, *in* THE POLITICS OF REGULATION: INSTITUTIONS AND REGULATORY REFORMS FOR THE AGE OF GOVERNANCE 145 (Jacint Jordana & David Levi-Faur eds., 2004).

regulation emphasize complexity, fragmentation, interdependencies, and government failures, and suggests the limits of the distinctions between the public and the private and between the global and the national."[19] And it also expanded an already quite substantial breadth for regulating—there was nothing beyond the power of accountability, and thus of management, through regulation if useful.[20] Accountability-based, data-driven governance appeared to solve the perennial problem of enforcement, and of the internalization of the command of law and regulation. Surveillance could serve not merely as tools but as "creators of social worlds . . . as forms of social engineering that legislate norms for acceptable and unacceptable behaviors and actions."[21]

None of this, however, appeared to disturb the supremacy or coherent integrity at the heart of law or in the construction of public rule systems, even as spaces for data-driven governance seeped into the regulatory state apparatus. But, suddenly, all of that appeared to change. The trigger was an action by China—which appears to have ascended to the position of principal driving force in global political theory and action—when the Chinese State Council published its 2014 *Notice Concerning Issuance of the Planning Outline for the Construction of a Social Credit System* (2014-2020).[22] It proposed using the technologies of big data and big data management along with the possibilities of artificial intelligence and machine learning to develop comprehensive data-driven structures for management around algorithms that can produce real time reward-punishment structures for social-legal-economic and other behaviors. This project, *a development of ratings and rewards systems*, means to unify and integrate systems of monitoring, transparency, and compliance within the traditional law-administrative regulation construct of state systems, and appears to be one of the most innovative and interesting efforts of this decade. In the process, of course, social credit, or data-driven governance and accounting-punishment-reward systems, can significantly upend the now centuries-old rule of law by effectively making its structures irrelevant.

Social credit can be understood in two senses. First, social credit itself references the specific project of the Chinese state to create a comprehensive legal and regulatory mechanism that they have named "social credit."[23]

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19. David Levi-Faur, *Regulation and Regulatory Governance, in* HANDBOOK ON THE POLITICS OF REGULATION 6 (2011).

20. *Id.* at 9, 16 ("[T]he expanding part of governance is regulation, that is, rulemaking, monitoring, and enforcement.").

21. Torin Monahan, *Technological Politics and Power in Everyday Life, in* SURVEILLANCE AND SECURITY 1, 12 (Torin Monahan ed., 2006).

22. This outline established a detailed and comprehensive roadmap for the implementation of China's social credit project. *See* Planning Outline for the Construction of a Social Credit System (2014-2020) (promulgated by the People's Republic of China State Council, June 14, 2014, rev'd Apr. 25, 2015), GF No. (2014)21 (China), https://chinacopyrightandmedia.wordpress.com/2014/06/14/planning-outline-for-the-construction-of-a-social-credit-system-2014-2020/ [hereinafter Planning Outline]. For an update on the progress of the implementation and social comments, see Zhang Yong (张勇), *Shehi Xinyong Tixi Jianshe Xiayibu Zhuyao Zai Sige Fangmian Zhuoli* (社会信用体系建设下一步主要在四个方面着力) [Four Areas of the Development of Social Credit], XINHUA NEWS, http://www.xinhuanet.com/politics/2018lh/2018-03/06/c_129823589.htm.

23. Planning Outline, *supra* note 22.

Second, it refers generally to a new mode of governance that recombines law and governance and the public and private spheres in new and hybrid ways that will likely transform the structures and principles on which legal, governance, and societal regulatory systems are now understood and through which they acquire their legitimacy. In both senses, the structures of social credit are similar. In each case, the system seeks to rate, score, or assess the object of regulation through a process that requires the acquisition of specific and relevant data, which is then interpreted through the application of an algorithm to produce an assessment, score, or measure which can be used to evaluate compliance with underlying objectives. Those scores then serve to guide the application of legal or administrative decisions—they can trigger rewards or suggest punishment.[24]

The triangular relationship between governmentalization (of both public and private institutional actors with managerial power), the mass of the population (which is its object and now its foundation), and "statistics" (that both define and serve to manage the mass of the population), is the essence of the problem of transparency in the twenty-first century.[25] At its limit, the enterprise of social credit suggests both the emergence of a new field of law as well as the negation of the privileging of law within economic and political structures. On the one hand, one might be tempted to see in the social credit enterprise a notion of the dissolution of the constitution of law within itself—that is, that the structures of legality, and its constitution, will have consumed itself. What will emerge from that self-consumption will be the methods and systems that it had once generated and which had been deployed in the service of the constitutional project—that the success of the constitutional notion will ultimately consume it so that where once there was constitution there will only be mechanics; where once there was principle, there will only be data; and where once there were norms, there will only be "statistics."[26] This is bound up in the more fundamental idea of the end of law and the irrelevance of lawyers except as technicians of a new system that lawyers no longer control. On the other hand, the success of social credit may require, and indeed may be dependent on, the simultaneous development of a law for the digital and data age. That is, in the digital age, society (however constituted) is even more in need of law's nomos and narrative to manage the use of the operation of data systems, and to protect the integrity of the generation of data itself, similar to the way that law is currently used to manage and protect the integrity of markets.[27] That nomos and narrative may vary depending on the societal and political context, but it must nevertheless develop alongside the re-constitution of the principles,

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24. Larry Catá Backer, *Social Credit in the West: Non-State Rating Systems for CSR Compliance*, LAW AT THE END OF THE DAY (Sept. 17, 2017), https://lcbackerblog.blogspot.com/2017/09/social-credit-in-west-non-state-rating.html.

25. Larry Catá Backer, *Transparency and Business in International Law, in* TRANSPARENCY IN INTERNATIONAL LAW 477–501 (Anne Peters & Andrea Bianchi eds., 2013).

26. *See* Bal Sokhi-Bulley, *Governing (Through) Rights: Statistics as Technologies of Governmentality*, 20 SOCIAL & LEGAL STUD. 139, 139–155 (2011); *see also* Alain Desrosieres, *The Economics of Convention and Statistics: The Paradox of Origins*, 36 HIST. SOC. RES. 64, 64–81 (2011).

27. *See, e.g.*, Manuel B. Aalbers, *Regulated Deregulation, in* HANDBOOK OF NEOLIBERALISM (Simon Springer, Kean Birch & Julie MacLeavy, eds., 2016) (on the use of law and regulation to protect the integrity of markets without interfering in their operations).

customs, and manners of governance. To understand social credit, one must understand the evolving structures of the relationships, in law and politics, between states, its masses, and the institutions through which it operates.[28] In that respect, data-driven governance systems are transforming the regulatory landscape of both states and other governance institutions. Grounded in principles of accountability and embedded in incentive-based systems for reducing risk and managing behaviors through mechanisms of choice and markets, these governance systems may well reshape the way states and other governance organs are constituted and operate.

This short essay has two objectives. The first is to examine the challenges that Chinese social credit ratings or assessment systems pose for effective implementation. The second is to consider the resonances and challenges of what might be considered Western variants on the Chinese social credit experiment. To these ends, Section II considers first the difficulties of separating the role of social credit as a set of techniques and as a means of advancing ideological principles and objectives. In this section, Chinese social credit is examined as an aspect of big data management with substantial governance and normative effects.[29] In that context, a number of issues are identified, such as social credit as a project of informatics, as systems of control and management, and as a governance mechanism. The section seeks to examine the proposition that to understand the shaping of law today (and soft law as well) one must understand social credit. The implications for the structure of government and for the exercise of social and political leadership might be profound. Section III then examines some of the ways in which Western efforts at social credit institutions have sought to meet similar challenges. The section first explores the context of social credit systems and their operationalizations in the West, principally in the private sphere and through the use of market mechanisms for behavior management.[30] It then examines the way that social credit might be used in the West as a technique of governance and as a means of embedding international standards in domestic behavior.

The essay concludes by suggesting that social credit represents the expression of new forms of governance that are possible only through the correct utilization of big data management. The extent to which state

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28. In the Chinese context, for example, that is itself the object of the development of law and legal technologies described in the 19th Chinese Communist Party Congress. *See, e.g., Xi Jinping Report to 19th CPC Nat'l. Cong.* CPCNEWS (Dec. 28, 2017), http://cpc.people.com.cn/n1/2017/1028/c64094-29613660.html.

29. *See* Gloria Davies, *Chinese Social Media, "Publicness" and One-Party Rule, in* ROUTLEDGE HANDBOOK OF NEW MEDIA IN ASIA (Larissa Hjorth & Olivia Khoo eds., 2015) (on Chinese big data management policy).

30. There has been some writing on the privatization of data collection in the West. *See* Günter K. Stahl & Ingmar Björkman, HANDBOOK OF RESEARCH IN INTERNATIONAL HUMAN RESOURCE MANAGEMENT 476 (2006). However, much of the discussion has been on ways to closely constrain the government in its collection and use of data. *See, e.g.,* Skylar Brooks & Domenico Lombardi, *Private Creditor Power and the Politics of Sovereign Debt Governance, in* TOO LITTLE, TOO LATE: THE QUEST TO RESOLVE SOVEREIGN DEBT CRISES 60 (Martin Guzman, José Antonio Ocampo & Joseph E. Stiglitz, eds., 2016); *see also Zhongguo Tuijin Shehui Xinyong Xitong Wuyueqi Shixinzhe Xianda Huoche Feiji* (中国推进社会信用系统 5月起失信者限搭火车飞机) [China Restrict Train and Airline Service to Bad Rating Person] RFA (March. 17, 2018), https://www.rfa.org/mandarin/Xinwen/8-03172018171914.html.

authorities in China are willing to utilize big data management will shape the form, scope, and direction of the governance possibilities inherent in social credit initiatives at the local, provincial, and national levels. But it is not just China; the quite visible move toward social credit in the West, albeit in a fragmented and functionally differentiated way among public and private institutions, also points to significant shifts in the relationship between law, the state, and government. Accountability regimes grounded in behavior standards enforced through data-driven analytics may well change the focus of public law from constitution and rule of law to analytics and algorithm.[31] In both China and the West, it is likely that a new language will be required to frame these emerging structures of control.

II.   THE PRAGMATIC CHALLENGES OF CHINESE SOCIAL CREDIT SYSTEM BUILDING: SOCIAL CREDIT THROUGH BIG DATA MANAGEMENT

China's social credit program has been developing since the beginning of this century.[32] Very slowly at first and then with much greater speed in the last several years, China has been more publicly pursuing new means of managing the development of its overall productive forces—not just economic forces, but social, cultural, and political forces, as well.[33] The design of the contemporary project is centered on ratings.[34] Ratings are well known in the West for their utility in managing behavior in the shadow of law.[35] That is, *in place of the commands of law and regulation* (based on the core idea that the object of the state is to order that things be done or not done), what China calls a *Social Credit Initiative, which is built around compliance*.[36] How one obeys the law becomes as important as the mere act of obedience.[37] It is in this way that social credit, through its programs of *rating and reward*, may act to further develop the productive potential of law itself.

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31.   Debra Logan, *What Is Information Governance? And Why Is It So Hard?*, GARTNER BLOG NETWORK (Jan. 11, 2010), http://blogs.gartner.com/debra_logan/2010/01/11/what-is-information-govern ance-and-why-is-it-so-hard/.

32.   *See* IAN BREMMER, US VS. THEM: THE FAILURE OF GLOBALISM (2018).

33.   This is bound up in the evolving concept of "socialist modernization." *See, Id*; *see also* Woguo Shehui Xinyong Tixi Jianshe Qude Zhongyao Jinzhan (我国社会信用体系建设取得重要进展) [Important Progress of China's Social Credit System] (July 10, 2018), http://society.people.com.cn/n1/2018/0710/c1008-30137239.html.

34.   Ruan Hong (阮红), *Tuidong Shehui Zuoyong Tixi Jianshe Jianli Tongyi de Shehui Xinyong Daima Zhidu* (推动社会作用体系建设建立统一的社会信用代码制度) [Promote Social Credit Through the Credit Rate System], 4 JINGJI GUANLI (经济管理) [Economic Management] 148 (2017).

35.   Laureen Elgert, *Rating the Sustainable City: 'Measurementality,' Transparency, and Unexpected Outcomes at the Knowledge-Policy Interface*, 79 ENVTL. SCI. & POL'Y. 16, 16–24 (2018).

36.   ANNIE MCCLANAHAN, DEAD PLEDGES: DEBT, CRISIS, AND TWENTY-FIRST-CENTURY CULTURE 66 (2018).

37.   *See, e.g.*, Alexandra Ma, *China Has Started Ranking Citizens with a Creepy 'Social Credit' System — Here's What You Can Do Wrong, and the Embarrassing, Demeaning Ways They Can Punish You*, BUS. INSIDER, (April 8, 2018), http://www.businessinsider.com/china-social-credit-system-punishments-and-rewards-explained-2018-4.

The Social Credit Initiative is a product of China's "top-level design" (顶层设计) approach;[38] coordinated by the Central Leading Small Group for Comprehensively Deepening Reforms.[39] Its central objective is the development of a national reputation system: assigning a social credit number that reflects a qualitative judgment of relevant data gathered about the subject. It will focus on four areas: "sincerity in government affairs" (政务诚信), "commercial sincerity" (商务诚信), "societal sincerity" (社会诚信), and "judicial credibility" (司法公信).[40] The term "social credit" actually veils the overall character of the project. Sincerity in this sense means integrity and trustworthiness. The core object, of course, is built around the idea of compliance—that the way one complies with law and social obligation will be as important as the fact that one complies at all.[41] That is a profound step forward from the more ancient forms of law and regulation. The former systems could be satisfied with the merest obeisance to its command; social credit systems judge compliance based on its effects given the spirit of the obligation or responsibility.

The principal theoretical framework for Chinese social credit initiatives were last comprehensively (and publicly) developed by the State Council in its *Notice Concerning Issuance of the Planning Outline for the Construction of a Social Credit System* (2014-2020).[42] A careful reading of the State Council Notice suggests that its authors understood their task as contributing to a new phase of the socialist market economy system and of a societal governance system.[43] This response was particularly relevant in the context

38.   Peng Libin (彭立兵), *Shenhua Dang de Jianshe Zhidu Gaige de Dingcengsheji* (深化党的建设制度改革的顶层设计) [Top-Level Design for Party System for Further Institution Reform], CPCNEWS (Sept. 2, 2014), http://theory.people.com.cn/n/2014/0902/c40531-25588373.html.

39.   Zhang Yi (张昱), *Gongzheng zai Shehui Xinyong Jianshe de Zuoyong Yanjiu* (公证在社会信用建设的作用研究) [Study on the Function of Public Notary Under Social Credit], 1 SHEHUI KEXUE WENZHAIBAN (社会科学文摘版) [Social Science Selected Articles] 74 (2016).

40.   Guowuyuan Guanyu Jiaqiang Zhengwu Chengxin Jianshe de Zhidao Yijian (国务院关于加强政务诚信建设的指导意见) [Guiding Opinion Concerning Improving the Development of Sincerity in Governmental Affairs] (promulgated by the State Council, effective Dec. 30, 2016), http://www.gov.cn/zhengce/content/2016-12/30/content_5154820.htm); *see also* Zhou Qiang, *Quanmian Shenhua Sifa Gongkai, Cujin Sifa Gongzheng, Tisheng Sifa Gongxin* (全面深化司法公开 促进司法公正 提升司法公信) [Comprehensively Further Advance Transparency, Improve Judicial Fairness, and Judicial Credibility] (report to National People's Congress), ZUIGAORENMINFAYUAN WANG (Dec. 5, 2016), http://www.court.gov.cn/zixun-xiangqing-29841.html.

41.   Yao Xueqing, Fangmin, Shao Yuzi (姚雪青 方 敏 邵玉姿), *Xinyong Youjiazhi Shouxin Youliliang Dashuju Guancha Shehui Xinyongtixi* (信用有价值 守信有力量大数据观察社会信用体系) [Value of Credit, Power of Credit, Big Data Social Credit System Review], RENMINWANG (人民网) (July 5, 2018), http://paper.people.com.cn/rmrb/html/2018-06/05/nw.D110000renmrb_20180605_1-09.htm.

42.   Grounded on the policy directive developed and approved by the 3rd Plenum of the 18th Party Congress that promotes new form of social governance in the new era, the Notice is a detailed and comprehensive roadmap for the implementation of China's social credit project. The Social Credit Planning Outline is composed by six parts, which identified the goal, the priority, the implementation and infrastructural supports of the project. Essentially, it sets up a blueprint to the implementation of the social credit project. To that end, the central government's blueprint will provide general instructions that allows local government and different departments and agencies to develop measures and projects executing the demands listed in the Central Planning. *See* Planning Outline, *supra* note 22.

43.   This was elaborated at some length in the document. In its discussion of the "main principles for social credit system construction" that document acknowledged that government promotion, and joint

of the challenges that China seemed to face in its globalizing economic development.[44] This was meant to represent a new approach to governance that better aligned with the objectives of Party and State.[45] The new approach to governance was, in part, a function of the frustration of leaders with the inability of state organs to prevent problems despite repeated efforts through conventional applications of government power (law, regulations, use of police and prosecutorial powers, etc.).[46] These problems included many that had been widely reported in China and abroad, such as grave production safety accidents, food and drug security incidents, commercial swindles, production and sales of counterfeit products, tax evasion, fraudulent financial claims, and academic impropriety.[47] Critically important, in terms of China's ability to meet its political and economic objectives, was closing the perceived gap between the extent of integrity in "government affairs and judicial credibility, and the expectations of the popular masses."[48] Social credit was to be applied to the important challenges posed by this gap.

To develop a comprehensive project of social credit-based regulatory structures, the document pointed to transformation in four key sectors: government, commercial activities, social integrity, and judicial credibility.[49]

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construction with society were to be a prominent feature of the initiative. *Id.* ¶ I(3) ("Fully give rein to the organizational, guiding, promoting and demonstration roles of government.") With respect to completing the legal system, standardizing development, the project was to "[p]rogressively establish and complete credit law and regulation systems and credit standards systems, strengthen credit information management, standardize the development of credit service structures, safeguard the security of credit information, and the rights and interests of information subjects." *Id.* In the context of comprehensive planning, and graduated implementation, the initiative was to be structured as a gradual building up of what eventually would be a comprehensive system touching on substantial areas of public life. *Id.* ("In view of the long-term nature, systemic nature and complexity of social credit system construction, strengthen top-level design, . . . plan the overall picture comprehensively, plan systematically, organize implementation in a planned and graduated manner."). The initiative was to be designed to foster breakthroughs in focus points, to strengthen application through small projects that could be scaled up. *Id.* ("Choose focus areas and model regions to launch credit construction demonstrations. Vigorously spread the socialized application of credit products, stimulate the interaction, exchange, coordination and sharing of credit information, complete combined social credit reward and punishment mechanisms, construct a social credit environment of sincerity, self-discipline, trust-keeping and mutual trust."). *Id.*

44.   The document in its "Circumstances and Requirements" section spoke to a set of circumstances and requirements posing challenges and requiring action. *Id.* ¶ I(2). These included an "assault phase" tied to deepening economic structural reform and perfecting the Socialist market economy system. Social credit initiatives were also tied to what were perceived as a strategic opportunity to accelerate transformation of the Chinese development method. Of greater concern was the perception of economic and social transformation unresponsive to traditional methods of public bodies. The document posited that society is becoming less homogenized ("pluralized"), that social contradictions are prominent, and that social organizations and management methods are seeing profound change. The move to social credit was a recognition of those trajectories. Lastly, the document noted the challenges posed by economic globalization. For China these included the need to deepen international cooperation and exchange, to establish international brands and reputations, to reduce foreign-related transaction costs, and to improve the country's soft power and international influence to better "master new globalized structures."

45.   The document made it clear that the development of social credit structures was to be closely aligned to the CCP Basic Line as amplified in statements from 18th CCP Congress and concluding Plenums. *See id.*

46.   *Id.*

47.   *Id.*

48.   *Id.*

49.   *Id.* ¶ II(1)–(4).

In the context of government, social credit was to be used as a trigger for a variety of governmental actions.[50] That is, the objective of social credit scoring is to create a seamless connection between access to services, especially popular services necessary for economic success, and social credit scores. And social credit scores would be understood as the composite (expressed as a number) of the analytics of the aggregate of the activities and associations of those who are subject to scoring. That, in turn, requires a substantial amount of data harvesting—sufficient, in fact, to produce data robust enough to produce a "score" that then can be seamlessly tied to certain consequences. In the governmental area, those consequences, as the document suggests, can be quite important. Yet, in the government sector, social credit scoring is also considered to be an important element in two other related areas. The first is to gauge the quality and consistency with which government agreements and commitments are honored. The second is the use of social credit scores to monitor civil servants.[51] Yet, the ambitions for social credit as a behavior management substitute for law and administrative regulation might be focused on economic relations (recall the relationship between social credit and the advancement of socialist modernization under the Chinese Communist Party (CCP) Basic Line).[52]

Social integrity[53] and judicial credibility[54] round out the initial scope of focus for the construction of social credit system mechanisms for behavior management. Social integrity issues focus on societal behavior and norms. Socialist modernization has always included an element of social progress.[55] These are identified herein for further refinement in ways that are now to be data-driven and disciplined by algorithms that can impose consequences grounded in the "scoring" produced from the analytics developed from data based on governmental objectives.[56] While Westerners may view this as intrusive, it may be more different in form than in effect compared to what passes for "normal" in Western societies. Anti-smoking campaigns and eugenics programs by employers are sourced in the same determination that institutions shape social relations and norms.[57] Judicial credibility goes to the

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50.   *Id.* ¶ II(1). These included activities that required administrative permission, government procurement, tendering and budding, labour and employment, social security, scientific research management, cadre promotion and appointment, management and supervision, application for government financial support and other such areas, and foster the development of a credit services market.

51.   *Id.*

52.   *Id.* ¶ II(2). These include the use of social credit in a variety of areas of commercial activity: production, logistics, finance, taxation, pricing ("clear retail pricing"), project construction, government procurement, tendering and bidding, transportation, e-commerce, statistics, services sector (professionals), advertising, and enterprise governance (including CSR).

53.   *Id.* ¶ II(3).

54.   *Id.* ¶ II(4).

55.   The document speaks to the close connection between social credit in the societal sphere and the construction of a socialist core value system. *Id.* ¶ III.

56.   Areas of focus include healthcare, birth control, hygiene, "social security," labor and employment, education and scientific research, culture, sports, tourism, intellectual property rights, environmental protection, credit records for natural persons in economic and social life, and Internet application and services. *Id.* Some of these, of course, can have profound effects on social life and the way people order their relations.

57.   In the university context, *see, e.g.,* Larry Catá Backer, *The New Eugenics—The Private Sector, the University, and Corporate Health and Wellness Initiatives,* MONITORING UNIV. GOVERNANCE (July

heart of the authority and legitimacy of the judicial and prosecutorial systems. It suggests that the data-driven analytics at the heart of social credit systems, as well as the application of the algorithmically-generated systems of incentives and punishments derived from judgments about the aggregate data produced by officials in the course of their work (now monitored), would increase the credibility and the integrity of the system as a whole.[58]

Social credit regimes can be embedded only if they are transformed from an *exogenous system of commands* (like traditional law and regulation, increasingly seen as a Western construct with all of its limitations for socialist development) to an *endogenous system of self-control*. To these ends, education plays a key role.[59] Indeed, there is a focus on the re-construction of the classroom as a moral space,[60] an analogy in the West well understood at least among certain sectors of the Western intelligentsia.[61] Classroom education, then, becomes cultural education, something that in turn is meant to engage society as a whole.[62] This involves a constant three element process. The first involves the establishment of models of appropriate conduct.[63] The second touches on the launching of topical activities concerning sincerity.[64] The third focuses on the development of campaigns that target conduct and norms of which the state disapproves.[65] Lastly, this new approach to education is also now transformed into a distinct field of study, with the state committed to finding the development of social credit management as a field of scholarly study through research and training programs.[66]

16, 2013), http://lcbpsusenate.blogspot.com/2013/07/the-new-eugenics-private-sector-and.html; Larry Catá Backer, *The Social Dimension of the Eugenics of Employee Benefits--The View From Penn State*, MONITORING UNIV. GOVERNANCE (Apr. 23, 2015), http://lcbpsusenate.blogspot.com/2015/04/the-social-dimension-of-eurgenics-of.html; Larry Catá Backer, *The "Wellness" Program at Penn State: The View From the Bottom Up,* MONITORING UNIV. GOVERNANCE (Aug. 6, 2013), http://lcbpsusenate. blogspot.com/2013/08/the-wellness-program-at-penn-state-view.html.

58.   Planning Outline, *supra* note 22, ¶ II(4). The areas to which social credit might be applied include the following: transparency in proceedings; prosecutorial credibility; public security services credibility; judicial administrative systems; and law enforcement standardization.

59.   *Id*. ¶ III ("Forcefully launch activities to let universal education and propaganda about credit enter enterprises, enter classrooms, enter communities, enter villages and enter households.").

60.   "Construct parameters for assessing value of classroom instruction in appropriate approaches to social credit and underlying moral principles." The Structures and Ideologies of Social Credit in the U.S., Larry Catá Backer (Apr. 25, 2018) (on file with author).

61.   *See, e.g.*, MICHEL FOUCAULT, THE BIRTH OF BIOPOLITICS: LECTURES AT THE COLLÈGE DE FRANCE, 1978–1979 (Michel Senellart ed., Graham Burchell, trans., Picador 2008) (2004).

62.   Planning Outline, *supra* note 22, ¶ III.

63.   *Id*. The Twelve Core Socialist Values of the CPC (社会主义核心价值观) comes to mind. These were promoted at the 18th National Congress of the Communist Party of China in 2012 and consist of "prosperity," "democracy," "civility," and "harmony"; the social values of "freedom," "equality," "justice" and the "rule of law"; and the individual values of "patriotism," "dedication," "integrity," and "friendship."

64.   Planning Outline, *supra* note 22, ¶ III ("Organize pubic [sic] interest activities such as the 'Sincerity Activity Week' [and] 'Quality Month.'").

65.   *Id*. ("[P]ersist in correcting unhealthy trends and evil practices of abusing power for personal gain, lying and cheating, forgetting integrity when tempted by gains, benefiting oneself at others' expense, etc., and establish trends of sectoral sincerity and integrity.").

66.   *Id*.

The document then considers the means of building this comprehensive new model of governance through social credit.[67] A key element is the establishment of credit information exchange and sharing.[68] That is, for social credit systems to work, there must be in place a robust internal market for data that is made available across the enterprise that is the state. Information-sharing, in turn, depends on information harvesting. Where information sources are not the same entities as information users, potentially complex systems of sharing and use must be developed, along with a mechanism for pricing information. The West, in this respect, appears to be ahead of China, but only in the construction of robust markets for data outside of the state (and subject to increasing scrutiny and criticism by non-state actors).[69] For China, that appears to mean development in four areas: (1) sectoral credit information systems; (2) local information systems; (3) credit investigation systems; and (4) uniform credit investigation platforms in the financial sector.[70]

The social credit system's objectives, of course, are behavior management, and the reconstruction of self-reflexive cultural norms that embed, that is, that make endogenous, behavior constraints. The goal is a self-policing nation guided into appropriate behaviors. To those ends, the document considers a number of mechanisms that must be developed to operationalize social credit systems as a comprehensive behavior management system. These include incentive structures and punishments for deviations; legal, regulatory and standards systems for credit; standardized credit service markets; protection for the rights and interests of credit information subjects; special rules for confession and self-correction; and credit information security management systems.[71]

Within social credit systems, the role of law and administrative regulation assumes a specific character. Law and administrative regulation become necessary first to establish social credit regimes, and then to provide the authoritative structures and operating rules of those systems. They are effectively constitutive—the way that constitutions provide a space for traditional lawmaking (and administrative regulation) in twentieth-century states, or the way that international law is sometimes used to establish international organizations to which states may cede some regulatory authority. Social credit systems, then, depend on law not as the source of its normative rules, but as an ordering device. Those who operate these social credit systems assume the role once traditionally held by administrators in public agencies. Clearly, those systems must operate within the political constraints of the system, but that speaks to its relation to the CPC rather than to the state apparatus. In any case, these key issues are at their formative stages as central authorities, provincial and local governments, and large private enterprises begin to generate an increasingly complex and interwoven set of rules. These rules, in turn, establish operating systems for the harvesting of data, its sharing, the analytics applied to make it useful, and

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67.   *Id*. ¶ IV.
68.   *Id*.
69.   *See infra* note 184.
70.   Planning Outline, *supra* note 22, ¶IV.
71.   *Id*. ¶ V.

the algorithms from which rewards and punishments are determined. Though the Western press has tended to focus only on the last piece of this complex process, it is the entire system that merits attention and further study.

Beyond its important but quite specific national context, social credit poses challenges, not just for China, but as a general proposition inherent in this form of governance. The challenges are grounded in the way that social credit—ratings and rewards—systems must be built. Institutions built on ratings and rewards function through the institutionalization of processes through which *ratings can be generated through targeted data harvesting, applied to proprietary algorithms, and coordinated with consequences in the form of incentives and punishments*. Thus understood, the challenges assume a pragmatic character and can be usefully divided along standard categories. The first consists of *system construction challenges*.[72] These include issues of integrity (诚信) in system construction, as well as integrity (诚信) in data identification and harvesting. The second touches on *management problems*.[73] These include problems of coherence across a vast governmental sphere, the integration with private social credit offshoots, and the control of administrative abuse in system operation. The third consists of a set of *political issues*.[74] These require specific attention to proper political leadership and a fidelity to the CCP Basic Line. They include the complex problem of integration with political and systems standards outside of China and affect Chinese enterprises operating abroad. The fourth includes a host of *technical issues*.[75] Among the most important of these are data harvesting,

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72. The construction of data-driven systems has been of intense interest in the business field. Based on the 2014 State Council Planning Outline Notice, the Department of Commerce developed internal policy details to implement a social credit project with a specific focus on the commerce area. This general policy guideline highlights the application of social credit at the consumer service industry, as well as large fields such as the insurance sector. *See Shangwubu guanyu JIakuai Tuijin Shangwu Chengxin jianshe Gongzuo de Shishi Yijian* (商务部关于加快推进商务诚信建设工作的实施意见) [Opinion on implementing measures to further advance commercial sincerity] (Oct. 13, 2014), SHANGWUBU (商务部) [Dept. of Commerce] http://www.mofcom.gov.cn/article/h/redht/201410/20141000757690.shtml.

73. Managing data systems, especially coordinating such systems with the objectives-based and norm-protective systems of rules, has been the subject of some study. For example, NDRC, China's top economic policy maker issued detailed policy statement on the E-commerce related social credit issue. The policy endorsed a new social credit measure to promote security and a fraud-free E-commerce market. *See Guanyu Quanmian Jiaqiang dianzi shangwu lingyu chengxin jianshe de zhidao yijian* (关于全面加强电子商务领域诚信建设的指导意见) [Guiding Opinion on Further Improve Sincerity in E-Commerce Industry], CYBERSPACE ADMIN. OF CHINA (Jan 17, 2017), http://www.cac.gov.cn/2017-01/17/c_1120323361.htm.

74. Political issues have been traditionally targeted to the collection and use of data by government. *See, e.g., Zhengwu Chengxin shi Diyi Chengxin* (政务诚信是"第一诚信") [Political Sincerity is the Priority of the All] PEOPLE.CN (Feb. 10, 2015), http://politics.people.com.cn/n/2015/0210/c70731-26535660.html. But enterprise behavior has also become important in the discussion. This is especially true when there are more and more scandals involved with the data breach and fraud in E-commerce. *See, e.g.*, Qiu Yewei (邱业伟), *Dianzi Shangwu Chengxin Queshi yu Chengxin de Goujian* (电子商务诚信缺失与诚信的构建) [The Lack of Good Faith in E-Commerce Transaction and Restoration of the Good Faith], 1 ZHENGFA LUNTAN (政法论坛) [Political and Law Forum]165–167 (2008).

75. This issue becomes more pertinent when there are multiple social credit experiments led by different agencies and departments with different focus. Unlike national identification number or passport system that administered by a singular agency in the government system, the social credit system is

data retention, and data integrity. The last challenge consists of *interpretation challenges*.[76] Among these are the problems of integrity (诚) in the construction and application of algorithms through which ratings are assigned, the construction of meaning from the data itself, and the ultimate difficulty of ensuring integrity (诚信) in the social credit system itself.

This section considers these issues in the following forms: first, the challenge of social credit as systems of norms and of techniques; second, the pragmatic challenges of social credit as informatics; third, the challenge of control; and fourth, the challenge of social credit as a system of governance.

A.   SOCIAL CREDIT AS NORM AND TECHNIQUE

All social credit systems, whether in China or as rating systems in the West, embed a strong normative element. That is, all rating systems construct norms and values even as they appear to measure norms and values received from other sources.[77] In a more general sense, the compliance function at the heart of social credit or rating systems is a function of both observation and the knowledge of being observed. These can be understood in two distinct senses.

The first is substantive. *Values are what you measure; what you measure are values*. It follows that even where conformity *to underlying normative assumptions* can be preserved, the very operation of systems grounded in surveillance and assessment will necessarily evolve those norms as they seek to apply them. The second addresses the normative element inherent in implementation. It may not be useful to adopt the traditional view of implementation as a merely ministerial task that is little more than an assemblage of techniques in the service of political or values-complying goals. Rather, sophisticated social credit or rating systems appear to move away from an assumption that surveillance and monitoring are *passive* responses to "bad conduct" and to an *active* principle: that surveillance (understood as data-based assessment of conduct) is an essential component of any normative system. Surveillance normativity thus posits that law is not self-enforcing.

> Those subject to the obligations of law must be made to obey positive commands, and prevented from shirking their duty to comply with negative obligations (the obligations to refrain from doing). Those

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implemented through multiple experiments led by different agencies or departments. Further exploration is needed for technical optimization. *See* Liu Yongfeng (刘永锋), *Dui Zhengxin Jiangguan Toxi Jianshe de Sikao* (对征信监管体系建设的思考) [Thoughts on the Construction of Credit Supervision System], 2 FA ZHAN (发展) [Development] 56–60 (2011).

76.   Concerns for the interpretation is grounded with an awareness of the potentiality of the technology and the reality of technical obstacles. Under cautious optimism, the implementation of the social credit and its function is restricted by its technical capacity. *See* Shi Mingsheng (时明生), *Qukuan lian Jishu zai Zhengxin ye de Yingyong Tanxi* (区块链技术在征信业的应用探析) [Application of Blockchain in Social Credit Project] 1 ZHENGXIN (征信) [Credit Collection] 20–24 (2018).

77.   *See, e.g.*, WILLIAM G. STAPLES, EVERYDAY SURVEILLANCE: VIGILANCE AND VISIBILITY IN POSTMODERN LIFE (2000) (discussing integration into everyday practices to extract from those practices the parameters of deviance for the creation of incentives toward the approved behavior).

subject to such obligations are no longer presumed to do so unless evidence to the contrary is produced. And that compulsion no longer comes at the point of a gun or in the uttering of individual representations of the legitimate authority of the state. Instead, it comes through the gaze; systems of constant observation combined with a self-awareness of being constantly observed that together coerces a particular set of behaviors tied to the character of the observation.[78]

The implementation of ratings or social credit systems changes the fundamental nature of the relationship among the state, the systems employed to ensure social harmony, and the advancement of the collective welfare of the nation. The change in the nature of the relationship between implementation surveillance normativity and individuals from command to compliance also *changes the nature of the relationship between the individual and the state from passive to active*. It is perhaps best understood in the context of the rise of a social "duty of loyalty"[79] at every level of the social order (acting for the benefit of the organization rather than for personal benefit) and the consequential focus on "corruption."[80] Social credit and rating systems thus produce a strong normative change in the fundamental organization of society—requiring active positive participation rather than passive obedience to the letter of command.

It applies with equal vigor in the private sector as well. "Tencent is zooming in on the credit structure in a sector it's dominating: gaming. The world's largest game developer by revenue just launched a credit rating system for online game players according to an announcement made on its Weibo."[81] The object is to manage demand (upwards). But social credit analytics are also constructed to maximize the value of the product.

> According to the firm, the scores are evaluated on a monthly basis from several aspects including completeness of account information, activity, gaming assets, security contribution and cheating behaviors. Spending more time in-game, real-name authentication and reporting cheating by others would help elevate the credit score. Cheating,

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78. Backer, *supra* note 3, at 118.

79. For an interesting discussion in the consumer context, *see* Ma del Mar García de los Salmones, Angel Herrero Crespo & Ignacio Rodríguez del Bosque, *Influence of Corporate Social Responsibility on Loyalty and Valuation of Services*, 61 J. BUS. ETHICS 369 (2005).

80. Corruption has moved to a dominant place within the context of governance. It is central to the principle of good governance and the integrity of governance systems. On the connection between corruption and social credit systems, *see* Tian Xiangbo & Xin Qiao, (田湘波, 幸巧), *Wanshan Shehui Xinyong Tixi, Jiaqiang Fubai Yunatou Zhili* (完善社会信用体系 加强腐败源头治理) [Improve Social Credit System, Improve the Measures on Corruption Source] (July 10, 2018), http://fanfu.people.com.cn/n1/2018/0710/c64371-30137463.html. On corruption and systemic integrity; *see, e.g.*, CONVENTION ON COMBATING BRIBERY OF FOREIGN PUBLIC OFFICIALS IN INTERNATIONAL BUSINESS TRANSACTIONS AND, ORG. FOR ECON. COOPERATION AND DEV. (2011), http://www.oecd.org/daf/anti-bribery/ConvCombatBribery_ENG.pdf.

81. Emma Lee, *Tencent Rolls Out Credit System for Online Gamers*, TECHNODE (April 8, 2018), https://technode.com/2018/04/08/tencent-rolls-out-credit-system-for-online-gamers/.

spreading illegal information and using bad language will reduce the score.[82]

It follows that the reward and punishment system is also geared to increasing demand and corporate income. "Players with high scores will be able to get chances to join internal tests of new games and get virtual presents."[83]

B.   SOCIAL CREDIT AS INFORMATICS

Social credit or ratings systems are built on data.[84] Without data there are no algorithms to interpret human or institutional behavior, no means of judging such behavior, and no manner of developing effective systems of consequences implied by the value attributed to the rating. But data itself is highly problematic—and also a highly political exercise. The challenges posed by data can be usefully divided into several parts.

First is the basic issue of *data identification*. What is raw information? What is judgment or conclusion? An easy example of this problem is "race": is it raw data or is it a judgment? These questions are not merely technical, they require application of core cultural, political, and normative assumptions to distinguish between raw facts (data) and the inferences from data.[85] For example, if one were to rate gardens based on the number of flowering plants in it, one might have to distinguish between garden flowers and weeds—that distinction is grounded not in fact (both plants flower) but in cultural decisions to distinguish between them in ways that may change over time.

The second challenge is the issue of *data choices*. One may be able to collect everything, but not everything will be useful for assessment and rating. Distinguishing between relevant and irrelevant data becomes a social, political, and economic act.[86] Thus, decisions about what is included or excluded in harvesting data help color analysis and provide evidence of normative bias or instrumental use of data.

The third challenge includes a host of *data collection issues*. Among these are the modalities of collection, which pose the following questions: must data be provided by those who generate it, will the state collect it itself, or will there have to be created specialized enterprises the purpose of which is data collection?[87] These are understood as issues of data collection activity or passivity (intake issues). Another set of issues concern data scope, that is the identification of what is collected, for what period, and how it is retained.

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82.   Liao Yongan Tan Man (廖永安 谭曼), *Yi xingyonglifa tuijin Shehui Xinyong Tixi Jianshe* (以信用立法推进社会信用体系建设) [Promote Social Credit Through Legislation], GUANGMING DAILY (光明日报) (Feb. 24, 2018), http://www.sic.gov.cn/News/572/8998.htm.

83.   Emma Lee, *supra* note 81.

84.   On the importance of data in the construction of systems, *see, e.g.,* Stephen Dillenburg, Timothy Greene & Homer Erekson, *Approaching Socially Responsible Investment with a Comprehensive Ratings Scheme: Total Social Impact*, 43 J. BUS. ETHICS 167 (2003).

85.   *See, e.g.,* VICTORIA DURRER, TOBY MILLER & DAVE O'BRIEN, THE ROUTLEDGE HANDBOOK OF GLOBAL CULTURAL POLICY (2017).

86.   *See, e.g.,* ROB KITCHIN, THE DATA REVOLUTION: BIG DATA, OPEN DATA, DATA INFRASTRUCTURES AND THEIR CONSEQUENCES (2014).

87.   MCCLANAHAN, *supra* note 36, at 66.

Yet another collection issue centers on focus. That is, social credit and rating systems must develop a coherent understanding of the way collected data will be organized and distributed. Related to these are issues of capacity to collect.[88] These include a host of problems dealing with the technical capacity to collect and use data. Lastly, there are the challenges of the analytical framework—the algorithm.[89] Among the most important of these is the fundamental issue of human or mechanical interpretation.[90] The move toward artificial intelligence does not solve the problem; it merely complicates the issue. Artificial intelligence, in this sense can be understood as shifting the focus of decision-making from lower tier decisions about system operation to more abstract operational level decision-making.

The fourth challenge includes issues of evaluation and sufficiency—that is, issues of *transition from data collection to the extraction of information from data*.[91] These touch on the two-way relationship between data collection and the objectives of collection. The choice of data can fundamentally affect the character of the information produced from data.[92] At the same time, assessments of the character of the need for information may affect the scope of the data harvested. Sufficiency issues include verification of data (an enormous issue of system integrity), data management (an issue of corruption), exposure (an issue of privacy), and confession (an issue of enforcement and management). Related to issues of evaluation are those of transparency. Transparency is the active element of surveillance.[93] The power of secret and public information includes not just the collection of data, but also the distribution of ratings and the publication of the consequences in terms of reward and punishment.[94] These issues, in turn, generate data that might itself require response from the system.

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88. Liu Jianzhou (刘建洲) , *Shehui Xinyong Tixi jianshe: Neihan, Moshi yu Lujingxuanze* (社会信用体系建设：内涵、模式与路径选择) [Social Credit System: Meaning, Mode and Design], 3 ZHONGGONG ZHONGYANG DANGXIAO XUEBAO (中共中央党校学报) [CPC Party School Journal] (2011).

89. Zhao Shubo (赵书博), *Tuijin Shehui Xinyong Tixi Jianshe Jishi Canyuzhe Youshi Shouyizhe* (推进社会信用体系建设　既是参与者又是受益者) [Promote Social Credit, Benefactors and Participants], CHINACOURT (Mar. 15, 2018), http://bjgy.chinacourt.org/article/detail/2018/03/id/3230583.shtml.

90. Fan Xiaoxi (范晓忻), *Dashuju Zhengxin yu Xiaowei Qiye Rongzi* (大数据征信与小微企业融资) [Big Data Credit System and Micro Financing], 22 ZHONGGUO JINGRONG （中国金融）[China Finance] 81 (2014).

91. Tian Xiangbo & Xin Qiao, (田湘波, 幸巧), *Wanshan Shehui Xinyong Tixi, Jiaqiang Fubai Yunatou Zhili* (完善社会信用体系 加强腐败源头治理) [Improve Social Credit System, Improve the Measures on Corruption Source] CPCNEWS.CN (Jul. 10, 2018), http://fanfu.people.com.cn/n1/2018/0710/c64371-30137463.html.

92. *Id*.

93. Bácker, *supra* note 25.

94. Mareike Ohlberg (马晓月)，Shazeda Ahmed (莎泽塔·艾哈迈德) & Bertram Lang (朗跃), *Zhongguo Shehui Xinyong Tixi de Yuqing yu Shijian* (中国社会信用体系的舆情与实践) [Central Planning, Local Experiments: The Complex Implementation of China's Social Credit System], 2 MERICS CHINA MONITOR 4, 10, 12 (2017), https://www.merics.org/sites/default/files/2017-12/171212_China_Monitor_43_Social_Credit_System_Implementation.pdf.

Ultimately these issues suggest the broader challenge of coherence and legitimacy.[95] The connection between the data, the interpretation, and the judgement must be explored. More importantly, it is related to the issue of system integrity and therefore of the legitimacy of the system as a means of managing behavior and applying social, economic and political norms. These issues are central, for example, to the construction of social credit systems in China, at least in theory.[96] Lastly, of course, systematic integrity issues touch on the legitimacy of leadership and of their own fundamental obligation to the state and society.

C.   SOCIAL CREDIT AS CONTROL

All social credit and rating systems have control as their primary object.[97] While the control element of law and regulation is grounded in command obedience, the control element of a social credit and ratings system is grounded in assessment, incentive, and compliance. That fundamental difference in form does not change the character of the objective, just the means to its realization. Social credit and rating agency mechanisms substitute the certainty of legal command for the incentive structures of inducement and exposure—the public rating.[98] But the transformation makes it easier to shift the costs of compliance from the state (which always has the primary obligation to monitor and enforce) to the objects of the enforcement.[99] The great control value of social credit and rating agencies is the incentive it provides for self-enforcement through the correlation between behavior and rewards/punishments selected through algorithms (thus reducing enforcement costs and shifting its forms to data gathering and imposing rewards and punishments, rather than to the policing function).[100] Yet these self-enforcement systems still require law—not as a normative but as a structuring tool (in the way that law might be understood in the West

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95.   Li Jin (李晶), *Woguo Shehui Xinyong Tixi Jianshe zai Xindai Lingyu de Yingyong* (我国社会信用体系建设在信贷领域的应用) [The Development of Social Credit in China's Financing Field], 3 ZHONGGUO CHANJING (中国产经) [CHINA INDUSTRY & ECONOMY] 68–72 (2018).

96.   Chen Xinnian (陈新年), *Cong Shehui Zhili Chuangxin Shijiao Kan Tuidong Shehui Xinyong Tixi Jianshe* (从社会治理创新视角看推动社会信用体系建设) [The Development of Social Credit System, A Prospective of Innovating Social Governance], 11 HONGGUAN JINGJI GUANLI (宏观经济管理) [MACRO-ECONOMIC MANAGEMENT] 57–60 (2017).

97.   Shao Yanjin (邵延进), *Shehui Xinyong Tixi Jianshe Bixu yi Fagui Chuangxin de Zhengxin Tixi wei Jichu* (社会信用体系建设必须以依法规范创新的征信体系为基础) [The Necessity for Chinese Social Credit System Construction to Regulate and Innovate Credit Reporting System by Law], 10 Zhengxin (征信) [Credit Collection] 4–7 (2017).

98.   Yu Jingjing (余晶晶), Liu jia (刘佳) & Li Jingxuan (李敬轩), *Shehui Xinyong Tixi Jianshe deRuogan Sikao* (社会信用体系建设的若干思考) [Thoughts on the Construction of Social Credit System], 1 *Dangzheng Ganbu Luntan* (党政干部论坛) [Cadres Tribune] 18–19 (2017).

99.   *See* IAN AYRES & JOHN BRAITHWAITE, RESPONSIVE REGULATION: TRANSCENDING THE DEREGULATION DEBATE (Oxford University Press 1995).

100.   As one Western journalist quipped in an article, "If you need a loan, it might be time to unfriend that human rights lawyer – and 'like' that Communist Party official." Tom Holland, *China's credit ratings plan: from social media to medium of social control*, SOUTH CHINA MORNING POST (Feb. 5, 2018), https://www.scmp.com/week-asia/opinion/article/2131737/chinas-credit-ratings-plan-social-media-medium-social-control.

when deployed to protect and enhance the integrity of markets). This objective has been suggested by Chinese authorities in the development of travel blacklists for low scoring individuals.[101] They also have utility for preserving military discipline.[102]

But the control objective also creates a set of new challenges. The first of these is the *location of control power*. Deciding where to locate the power to make fundamental determinations with respect to data identification, algorithm, and rewards and punishments effectively carries with it the power of controlling behavior. The choice is between localizing this power in provinces and cities, or retaining it in the central government. Invariably compromise will be necessary. But the resulting architecture of control, locating some power along the entire spectrum of the governmental apparatus, will carry with it a set of administrative problems. These will inevitably produce **the need to create a meta-social credit system** to oversee the administration of all social credit systems throughout the country.[103] In China, that might be connected to the development of a supervisory system under the State Supervision Law.[104]

In China, meta-social credit or ratings control agencies will have to have the task of ensuring integrity and sincerity (诚信) among all aspects of social credit or ratings throughout the state and in the private sector.[105] Critical tasks will likely include creating a central authority for assigning responsibility for the production of information.[106] Related to this will be the responsibility of active dat production—something requiring state supervision and a strong leadership role for the Communist Party.[107] Even more challenging will be the task of developing and monitoring passive harvesting through state and private agencies. These create issues of integrity (诚信) of their own.[108] Meta-social credit systems will likely also face the issue of coherence in rules for controlling access to data and interpretation algorithms, as well as for determining the use of information.[109] Shifting the identification and

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101. *See, e.g.*, Campos Santiago, *China plans to offer incentives for positive social credit ratings*, GLOBAL TIMES (June 10, 2018).The reporting noted: "'Publishing a list of offenders has made it possible for society to sanction people with low credit. Now what is needed is to perfect the legal framework, with better sharing of credit information, or a better bankruptcy law, so that a complete credit system encompassing individuals, companies and government departments can be achieved,' said Tian."

102. Fu Danni, *Soldiers Put on Social Credit Blacklist for Leaving Service*, SIXTH TONE (Mar. 19 2018), https://www.sixthtone.com/news/1001938/soldiers-put-on-social-credit-blacklist-for-leaving-service ("[T]hree servicemen who refused to fulfill their military obligations in the eastern province of Anhui were fined 30,000 yuan ($4,700) each and banned from planes and trains for two years").

103. BETH SIMONE NOVECK, SMART CITIZENS, SMARTER STATE: THE TECHNOLOGIES OF EXPERTISE AND THE FUTURE OF GOVERNING (Harvard University Press 2015).

104. *Shehui Xinyong Tixi Jianshe de Ruogan Sikao* (社会信用体系建设的若干思考) [Thoughts on Promoting Social Credit System], Zhongguo Jingrong (中国金融) [China Finance] (Aug. 11, 2014), http://www.wenming.cn/ll_pd/sh/201408/t20140811_2112153.shtml.

105. Planning Outline, *supra* note 22.

106. MONTGOMERY VAN WART, LEADERSHIP IN PUBLIC ORGANIZATIONS 38 (M.E. Sharpe 2008).

107. OLGA GALININA, SERGEY ANDREEV, SERGEY BALANDIN & YEVGENI KOUCHERYAVY, INTERNET OF THINGS, SMART SPACES, AND NEXT GENERATION NETWORKS AND SYSTEMS 406 (Springer 2017).

108. Majia Holmer Nadesan, *Transparency and Neoliberal Logics of Corporate Economic and Social Responsibility, in* THE HANDBOOK OF COMMUNICATION AND CORPORATE SOCIAL RESPONSIBILITY (Øyvind Ihlen, Jennifer Bartlett & Steve May eds., Wiley 2011).

109. DAVID KIRSH, FOUNDATIONS OF ARTIFICIAL INTELLIGENCE 111 (MIT Press 1992).

management of raw data up to controlling institutions while moving judgment-making and consequence-dealing responsibilities down from controlling institutions will serve as an important challenge to the construction of legitimacy enhancing systems that push forward any all-around program of using social credit or rating to advance socialist modernization in the social, political and cultural spheres, and to a lesser extent, the economic sphere.[110]

D.   SOCIAL CREDIT AS GOVERNANCE.

> Buying video games, for example, can lower your social credit score under Sesame Credit's system. . . . Wired magazine spoke to Sesame Credit creators Alibaba in late 2017: "Alibaba admits it judges people by the types of products they buy. 'Someone who plays video games for ten hours a day, for example, would be considered an idle person,' says Li Yingyun, Sesame's Technology Director."[111]

The necessity of considering the control elements of social credit, and the likely need for meta-social credit agencies as the primary monitoring and rating force of social credit systems, nationally touch on the largest and most challenging issue of governance through social credit or rating systems. This is the problem with the character of governance and its enhancement of rule of law now understood in an entirely new, and perhaps uniquely socialist way. It touches on a transformation of governance that has affected all aspects of control in the West in the form of *gouvernmentalité*—a linking of governance with the techniques of its power.[112]

But to embed social credit as a means of providing integrity (诚信) in the governance process itself by changing the ultimate character of the interactions between the state and the masses will require an advancement of ideological thinking. Yet this advancement ties in nicely with contemporary views of the fusion of politics, economics, and security managed through the apparatus of institutions, sometimes privileging the state (e.g., China)[113] and sometimes de-centering political institutions within fractured networks of power (e.g., the West),[114] but always focusing on the population. "This state of government which bears essentially on population and both refers itself to

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110.   Matthias Goldmann, *Inside Relative Normativity: From Sources to STANDARD Instruments for the Exercise of International Public Authority, in* THE EXERCISE OF PUBLIC AUTHORITY BY INTERNATIONAL INSTITUTIONS: ADVANCING INTERNATIONAL INSTITUTIONAL LAW 682 (Armin Bogdandy, Rüdiger Wolfrum, Jochen Bernstorff, Philipp Dann & Matthias Goldmann eds., 2010).

111.   Alex Avard, *Minus 10 Social Credits! 600 Million Gamers Face Punishment for Their Hobby as Life Imitates A Black Mirror Episode*, GAMESRADAR (Mar. 6, 2018), https://www.gamesradar.com/minus-10-social-credits-600-million-gamers-face-punishment-for-their-hobby-as-life-imitates-a-black-mirror-episode/ (citing Rachel Botsman, *Big Data Meets Big Brother as China Moves to Rate Its Citizens*, WIRED (Oct. 21, 2017), https://www.wired.co.uk/article/chinese-government-social-credit-score-privacy-invasion).

112.   To govern, then, means to govern things. *See,* Mascini & van Erp, *supra* note 8, at 94.

113.   ROBERT O'BRIEN, ANNE MARIE GOETZ, JAN AART SCHOLTE & MARC WILLIAMS, CONTESTING GLOBAL GOVERNANCE: MULTILATERAL ECONOMIC INSTITUTIONS AND GLOBAL SOCIAL MOVEMENTS 226 (Cambridge University Press 2000).

114.   JOSIAH OBER, THE RISE AND FALL OF CLASSICAL GREECE 10 (Princeton University Press 2015).

and makes use of the instrumentation of economic savoir could be seen as corresponding to a type of society controlled by the apparatuses of security.[115]" It has been suggested that the system of social credit is inherently compatible with the core elements of the self-reflexive character of the Chinese political system.[116]

In the first instance it requires reconsidering the role and character of policing in modern socialist (and Western) societies. **Policing** appears to have become a primary focus of governance.[117] In the United States, for example, the Federal Securities Law can be understood as the construction of a legal order that centers its effectiveness on the disclosure and policing of compliance with rules.[118] That ultimate regulator, the federal government, selects the data to be gathered, deploys corporate outsiders to monitor internal surveillance efficiencies, defines the boundaries of effective analysis (that is of analysis with legal effects), and selects the judgment to be made from certain clusters of information, but not from others. In that context, one can understand the character of governance through law. Surveillance, here in its normative/regulatory guise, confronts the issues: **Is there an ideal from which deviations can be judged,** and at what point is deviation severe enough to merit discipline and correction? The answer increasingly appears to be no. . . and yes![119]

Yet the move to policing and compliance through systems of data harvesting that produce ratings through the judgement of an algorithm that leads to incentives or punishment will—like the legal and regulatory systems that preceded it—also **produce resistance.[120]** In the context of social credit and rating systems, that resistance might tend to use similar techniques as the system that is being resisted.[121] For example, the control of crowds and mass protests through the techniques of surveillance has been met by evolving techniques of resistance based on the same techniques deployed to control crowds.[122]

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115. Michel Foucault, THE FOUCAULT EFFECT: STUDIES IN GOVERNMENTALITY WITH TWO LECTURES BY AND AN INTERVIEW WITH MICHEL FOUCAULT 104 (ed. Graham Burchell, Colin Gordon, & Peter Miller).

116. *See* Samantha Hoffman, *Programming China: The Communist Party's autonomic approach to Managing State Security*, MERCATOR INST. CHINESE STUDIES (Dec. 12, 2017), https://www.merics.org/sites/default/files/2017-12/171212_China_Monitor_44_Programming_China_EN__0.pdf.

117 . Peter K. Manning, *Drama, The Police and the Sacred, in* POLICING: POLITICS, CULTURE, AND CONTROL (Tim Newburn & Jill Peay eds., 2012).

118. Larry E. Ribstein, *Private Ordering and the Securities Laws: The Case of General Partnerships*, 42 CASE W. RES. L. REV. 23 (1992).

119. INDIRA CARR & PETER STONE, INTERNATIONAL TRADE LAW (6th ed. 2017).

120. William Isaac & Andi Dixon, *Why Big-Data Analysis of Police Activity Is Inherently Biased*, THE CONVERSATION (May 9, 2017, 9:34 PM), https://theconversation.com/why-big-data-analysis-of-police-activity-is-inherently-biased-72640.

121. It has been noted that "[i]t will therefore be critical to examine how strategic relations between the state and private sector are materialized through the national information superstructure and how enclosure of social communication is achieved through the policy and legislative process of making the system mandatory, a process that may simultaneously open black market identities for those citizens who seek to escape the state-corporate nexus of determination." Ramon Salim Diab, *Becoming-Infrastructure: Datafication, Deactivation, and the Social Credit System*, 1 J. CRITICAL LIBRARY & INFO. STUD. 1, 18 (2017).

122. *Id*.

It is also important to remember that this form of *governmentality* **follows the normative basis for political organization**. Social credit and ratings systems can have an inherently distinct socialist and Western character, grounded in the political ideologies of each system and the customs and traditions of the specific state in which it is used. In the West, that governance power of surveillance and control has fractured and one can expect social credit systems to remain the province of private enterprises as well as of state organs. One can expect a growing coordination of efforts. But it is unlikely that a centralized social credit system will emerge, even as the aggregation of all social credit sub systems effectively change the aggregate character of governance in Western societies. In China, the forms of governmentality are going in the opposite direction. One can expect centralization through the state and the construction outbound of cooperative partnerships with private enterprises, whose own sub-systems can be integrated with the overall state system, even as it is permitted a certain autonomy within its specific area of activity.

III.   THE INCORPORATION OF SOCIAL CREDIT AS NORM, TECHNIQUE, INFORMATICS, AND GOVERNANCE IN THE WEST.

One starts in the West with the ideology of rights at the dawn of the age of big data governance.[123] Within the purview of the state, individual rights are collectively expressed but individually performed, and thus judged in relation to the expectations of those who control the apparatus of state in its governmental and societal forms. Rights are the collective expression of those individual activities that the state must protect or against which the state may not interfere. Collective rights individually applied appear to be the principle on which the state (and eventually private collectives to some extent) has been managed within the cage of law. Still, the power relation always tilts toward the state and toward the preservation of the right, understood as "property" in the hands of the collective in whose service the state is constituted. This is a different but perhaps useful approach to Western conceptions of rights in ways that may resonate with the modern mind—that "rights" are the aggregated terms under which a state retains the Western version of the Chinese political notion of "mandate of heaven" (天命).

All of this is well known and well worn. Its modern manifestation—even within the fractured politics and societal control battles among the various ethnicities, religions, genders, and classes that now constitute the tribal structures of the United States—attest to the vigor of the notion of collectivity (even when fractured) in norms and individuality in performance and discipline. The intensification of modern battles among these tribal units for control of national space has produced the large number of so-called political conflicts of our own day. This is nothing new, of course. Religious factions previously had long sought to apply their own structures "extraterritorially" within national spaces, and those tools of aggressive

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123.   Larry Catá Backer, *Ruminations 73: On American Independence Day 2017—Collective Rights Individually Performed at the Dawn of the Age of Data*, LAW AT THE END OF THE DAY (Jul. 4, 2017), https://lcbackerblog.blogspot.com/2017/07/ruminations-73-on-american-independence.html.

expansion have now been taken and refined by others eager to expand the sting of their collective norms beyond their *volkish* (ethnic and national) boundaries.[124]

That this has now been deeply embedded within the politics of the state is merely the acknowledgement of the growing popular taste for the expansion of the jurisdiction of the state into virtually every facet of life—and thought. And that appears to have opened a door that technology has constructed and the private sector has long inhabited—the world in which the collective right itself becomes an incarnate object(ive) and its subjects the individuals whose performance of rights serves as evidence of the incarnation of the right (collectively). At the same time, that transformation both elevates the individual to a position as the ultimate target of rights, and simultaneously reduces the individual to nothing more than that expression. The individual is "seen" only through its performance of abstract principles (rights), and it is those collective rights that then assume concrete form. Consider the individual in the territory of the enterprise. She is the sum of her shopping habits, her consumption of food and other objects. She may be reduced to the sum of her "Netflix" account or her reading purchases from iBooks or Amazon, in the same way that a corporation is sometimes reduced to little more than its financial statements.[125] Her political views are understood as the sum of her donations to charities and her political affiliations. She becomes "real" only when seen against the accumulated consumptive choices she makes (one can consume politics and religion as easily as one consumes a bowl of porridge). But she is more than that—this aggregation of choices that re-incarnates the abstracted individual (in the face of collective rights) also opens the possibilities for judgement, discipline, and control. Judgement comes when the collective offers its view of the value (collectively) of the exercise of individual rights (eating fatty foods, drinking, viewing certain movies, etc.).

Discipline comes when the costs of choices can be imposed on the individual (bad credit ratings increases the cost of borrowing; smoking raises costs of health benefit plans, etc.).[126] And control comes when aggregated data of choices suggests the turn of policy in terms of managing the range of choices and directing choices toward particular ends (offering vinyl records, restricting the sale of liquor, etc.).[127] When combined with the flexibility of markets for information, and consent driven transactions, Western social credit systems can be embedded within the ecologies of market driven policies.

> A brand new fintech, Lodex, will allow the public to combine credit scores and an optional social score to get better rates through lenders

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124.   KAMARI MAXINE CLARKE & DEBORAH A. THOMAS, GLOBALIZATION AND RACE: TRANSFORMATIONS IN THE CULTURAL PRODUCTION OF BLACKNESS 31 (Duke University Press 2006).

125.   *iBooks*, APPLE, INC., https://itunes.apple.com/us/app/ibooks/id364709193?mt=8 (last visited Sept. 2, 2018); *What is Netflix?*, NETFLIX, INC., https://help.netflix.com/en/node/412 (last visited Sept. 2, 2018); *see also* Adrienne LaFrance, *Amazon Is Making It Easier for Companies to Track You*, ATLANTIC (Apr. 14, 2017), https://www.theatlantic.com/technology/archive/2017/04/amazon-is-making-it-easier-for-companies-to-track-you/522999/.

126 FREDERICK SCHAUER, THE FORCE OF LAW 218 (2015).

127 RICHARD M. RYAN, THE OXFORD HANDBOOK OF HUMAN MOTIVATION (2013)

and finance brokers. The auction-style platform lets individuals share these scores anonymously, set up an auction from their smartphone and watch the bids come in. It will be free for consumers.[128]

Sometimes, this integrated credit scoring is not done with the complicity of the parties; where Chinese social credit speaks to integrity and social obligation, Western constructions of private social credit systems speak to risk.[129] And, indeed, the dynamics of integrated social credit style systems—from data harvesting, to analytics, to the application of algorithms to deliver rewards and punishments—has already become part of some prominent internet based games.[130] And with it, an entire generation of individuals will be trained to see in such systems nothing either extraordinary or threatening.

The power of surveillance and data analytics is not limited to the private sector. And indeed, the traditional focus of information has been tied to the power of the state and the integrity of its political organization and operation—usually encased in substantial and complex systems of law.[131] The conventional problems fall into two categories.[132] The first is collection

128.   Miklos Bolza, *Social Scoring to Complement Credit History*, AUSTRALIAN BROKER (Nov. 15, 2017),   https://www.brokernews.com.au/news/breaking-news/social-scoring-to-complement-credit-history-243630.aspx.

129.   This has emerged in the Indian loan industry. "As banks sharpen their internal assessment of risk before lending, they are investing in analytics, data gathering and use of social media more now than on conventional tools like score from credit information bureaus, which capture borrowing." Joel Rebello & Saloni Shukla, *Forget Credit Rating, Your Social Media Posts May Decide Whether You Will Get a Loan or Not*, ECONOMIC TIMES (Dec. 13, 2017), https://economictimes.indiatimes.com/industry/banking/finance/banking/forget-credit-rating-your-social-media-posts-may-decide-whether-you-will-get-a-loan-or-not/articleshow/62044761.cms. These social credit structures access both generally available posting and also data harvesting through convenience features like mobile banking apps to harvest and use data:

> "Credit bureaus are increasingly becoming irrelevant," says Dipak Gupta, joint managing director at Kotak Mahindra Bank. "Traditionally, we have had 40% weightage to bureaus, but because there is so much data available that weightage may be 20%." In March, Kotak launched a digital savings bank account, which allows customers to save and pay using their mobile phones. Gupta said the information that the bank got through mobile phones is very useful to make credit decisions and also to prevent fraud. *Id*.

130.   "I was an avid World of Warcraft player until one day the game changed unfavourably. Developers introduced a thing called a gear score, which gave every player a rating based on what items they possessed. . . . Suddenly players with low scores were locked out of group opportunities and many doors to advance in the game closed shut." Simon Waters, Editorial, *Warning, Your Social Score Is Below Acceptable Levels*, New Zealand Herald (May 3, 2018), https://www.nzherald.co.nz/technology/news/article.cfm?c_id=5&objectid=12041421.

131.   "In fact, the level of coordination between agencies and bureaucracies of the state implied by the term surveillance, with its connotation of linkages between data collection and repression, suggests capabilities that the state may not possess." Akhil Gupta, *Governing Population: The Integrated Child Development Services Program in India, in* STATES OF IMAGINATION: ETHNOGRAPHIC EXPLORATIONS OF THE POSTCOLONIAL STATE 65, 88 (Thomas Blom Hansen & Finn Stepputat eds., 2001); *see also* Mitchell Dean, *"Demonic Societies": Liberalism, Biopolitics, and Sovereignty, in* STATES OF IMAGINATION: ETHNOGRAPHIC EXPLORATIONS OF THE POSTCOLONIAL STATE 41, 59–61 (Thomas Blom, Hansen & Finn Stepputat eds., 2001) (discussing data collection and repression in the context of biopolitical racism).

132.   *See, e.g.,* Rachel Levinson-Waldman, *What the Government Does with Americans' Data*, BRENNAN CENTER FOR JUSTICE (2013), https://www.brennancenter.org/sites/default/files/publications/Data%20Retention%20-%20FINAL.pdf.

by prosecutorial and police/security services. This tends to be the most contentious and political.[133] The second is the harvesting and use of massive amounts of information by administrative agencies directly or collaterally related to their missions.[134] These "are problems of information processing—the storage, use, or analysis of data—rather than information collection. . . . but they also affect social structure by altering the kind of relationships people have with the institutions that make important decisions about their lives."[135]

As governmental operations have expanded, information has sometimes come to be used in a manner and under information cultures that mimic those of the private sector. These include all of the usual issues—coherence in data policies, cooperation within an organization, legal constraints, and the like.[136] The governance utility of these programs are better known now. One example is the disciplinary power of the American Food Stamp Program.[137] Virginia Eubanks has shown how the introduction of the electronic benefit transfer (EBT) system has altered the lives of poor people receiving food stamps since the Welfare Reform Act of 1996.[138] She argued that the imposition of the new system facilitated an intensification of surveillance that significantly limited people's ability to meet their needs in their own way—they had to stay within the constraints of the system that both monitored and provided benefits.[139] She noted how as the system intensified monitoring and data extraction, it ironically became much more opaque and arbitrary—in the sense that it could not be reasoned or engaged with.[140] Lastly, she noted how data harvesting itself then served to distort the lives of individuals by fracturing the data generated through surveillance and engaging in data transactions that effectively fragmented knowledge as it constituted and reconstituted data to suit the needs of end users.[141] This last effect was intensified as governmental efforts were privatized and data itself provided a means of commodifying and extracting value from data generating services.

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133. "Granted, the federal government, law enforcement, and private sector rely on information gathering in order to protect the general welfare, fight crime, and conduct business. But the surveillance of citizens has risen so sharply in recent years that the ACLU warns against the potential for abuse." DAVID M. KAPLAN, READINGS IN THE PHILOSOPHY OF TECHNOLOGY 247 (2d ed. 2009).

134. *See* Rebecca R. Rosen, *Why Should We Even Care If the Government Is Collecting Our Data?*, ATLANTIC (Jun. 11, 2013), https://www.theatlantic.com/technology/archive/2013/06/why-should-we-even-care-if-the-government-is-collecting-our-data/276732/.

135. David Solove, *'I've Got Nothing to Hide' and Other Misunderstandings of Privacy*, 44 SAN DIEGO L. REV. 745 (2007).

136. *How States Can Gather Better Data for Evaluating Tax Incentives*, Brief, PEW CHARITABLE Trust (June 2018), http://www.pewtrusts.org/-/media/assets/2018/06/how-states-gather-data-tax-incentives_brief.pdf.

137. The Food Stamp Program was authorized by Congress through legislation, and operated by Secretary of Agriculture since 1962. It provides food purchasing assistance to low-income people in U.S. *See Supplemental Nutrition Assistance Program (SNAP)*, USDA FOOD & NUTRITION SERVICE (Nov. 28, 2017), https://www.fns.usda.gov/snap/short-history-snap.

138. Virginia Eubanks, *Technologies of Citizenship: Surveillance and Political Learning in the Welfare System, in* SURVEILLANCE AND SECURITY: TECHNOLOGICAL POLITICS AND POWER IN EVERYDAY LIFE 89 (Torin Monahan ed., 2006).

139. *Id.* at 90.

140. *Id.* at 91.

141. *Id.*

It is thus easier to see how this progress from collective rights to collective management in the age of information has a more transformative effect as well. This age of metrics, of information, and of algorithms, appears to have inverted the traditional relationship between collective and individual, though not the principle itself (i.e., collective rights individually applied). Where once there was only the state managed within law, now individual performance of collective rights is managed within cages of information. And not just by the state, but through its direct and indirect instrumentalities—enterprises, educational institutions, religion, and societal organizations (especially those fractured along sub-collective lines). Each of us already is reduced to the manifestation of our aggregate actions every time we seek entry into the United States; and sometimes when we seek to vote or get a job. It is only a matter of time before the state, through objectives based management programs—grounded in rights and obligations, of course—embraces fully the pattern of judgment, discipline, and control through data management and interpretation as the foundation for a new sort of governance.[142] Inevitably, the state—together with the non-state sectors through which state power will be privatized—will begin to move aggressively not merely to "see" individuals as collections of data, but to use that data to make judgements about those individuals and choices, and to seek to both discipline and control.[143] To that end, the algorithm will become the new statute and the variable in econometrics the new basis of public opinion. We appear to be passing from the age of rights to the age of information-management, and from the age of collective responsibility and constraints to the age of collective management.

The reconstitution of the individual as the convergence point of data has now given new form to the principles inherent in our Declaration of Independence,[144] and in the process, appears (again) to radically transform the constitution of the state and the language of power. The only real question touches on the relationship of ancient structures of laws and rights—the violations of which revoked Britain's Mandate of Heaven over its American colonies in 1776—to the new structures of governance and management from which rights will now be derived, preserved, and managed.[145] And to that end, the United States, like other Western liberal democracies, has already opened the door to more polycentric governance.[146] It increasingly combines the old traditional structures of law as command, with the more

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142. Renata Paola Dameri, Roberto Garelli & Francesca Ricciardi, *The Didactic Challenge of Accounting Information Systems and ERPs for Business Schools: A Proposal for the Italian Universities*, *in* 3 LECTURE NOTES IN INFORMATION SYSTEMS AND ORGANISATION: ACCOUNTING INFORMATION SYSTEMS FOR DECISION MAKING 339–41 (Daniela Mancini et al. eds., 2013).

143. THE FUTURE OF THE PUBLIC DOMAIN: IDENTIFYING THE COMMONS IN INFORMATION LAW 249 (Lucie Guibault & P. Bernt Hugenholtz eds., 2006).

144. CARL SCHMITT, CONSTITUTIONAL THEORY 126 (2008).

145. *See* Larry Catá Backer, *Ruminations 79: On American Independence Day 2018—The Meaning of Grievances Beyond the Principles at Its Edges; The U.S. Declaration of Independence in the NEW ERA*, LAW AT THE END OF THE DAY (July 4, 2018), http://lcbackerblog.blogspot.com/2018/07/ruminations-79-on-american-independence.html.

146. Andreas Georg Scherer & Guido Palazzo, *The New Political Role of Business in a Globalized World: A Review of a New Perspective on CSR and its Implications for the Firm, Governance, and Democracy*, 4 J. MGMT. STUDY 899 (2011).

flexible managerial approaches of data-based rating and discretion guiding systems. It has begun to emphasize governance grounded on compliance and cooperation,[147] especially with respect to the construction of monitoring and surveillance systems within enterprises subject to legal requirements.[148] And most important of all, it has recognized the fracture of this sort of governance power by locating some of its sources well outside the state apparatus. News media effectively influence ratings of universities,[149] even as state agencies serve to review and certify them.[150] Private credit agencies rate the creditworthiness of individuals,[151] enterprises, and government[152] through the application of criteria and the harvesting of data under their control and molded to suit their objectives.[153] And as the next section suggests, private global civil society now rates performance in the area of the corporate social responsibility using its own data gathering systems to which proprietary algorithms are applied.[154]

A.   SOCIAL CREDIT SYSTEMS IN THE WEST: A VIEW FROM THE PRIVATE SECTOR.

There is no social credit system in the West analogous to the emerging Chinese model. But that should provide little solace to those who view the institution of new forms of governance as a potential challenge to the orderliness and legitimacy-enhancing structures of a system of laws and administrative regulations constrained by rule of law and overseen by elected officials, bureaucrats, and courts. In its place one finds the unifying structures of markets for data[155] around which societally coherent norms of

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147.   Benito Arrunada & Veneta Andonova, *Market Institutions and Judicial Rulemaking*, *in* HANDBOOK OF NEW INSTITUTIONAL ECON. 229, 232 (Claude Menard & Mary M. Shirley eds., 2005).

148.   This is especially true in the context of the legislation of modest corporate social responsibility in Western States. *See* Annie Kelly, *The UK's New Slavery Laws Explained: What Do They Mean for Business?*, GUARDIAN (Dec. 14, 2015), https://www.theguardian.com/sustainable-business/2015/dec/14/modern-slavery-act-explained-business-responsibility-supply-chain.

149.   *See, e.g.,* Sheryl Tremblay, *Are We Teaching International Media at Small Liberal Arts Colleges?*, *in* DIGITAL TRANSFORMATION IN JOURNALISM AND NEWS MEDIA: MEDIA MANAGEMENT, MEDIA CONVERGENCE AND GLOBALIZATION, at 504 (Mike Friedrichsen & Yahya Kamalipour eds., Media Bus. & Innovation, 2017) (explaining how top liberal arts colleges offered courses focused on issues of international media).

150.   Janna Anderson, Jan Lauren Boyles & Lee Rainie, *The Future of Higher Education*, PEW RES. CTR. (July 27, 2012), http://www.pewinternet.org/2012/07/27/the-future-of-higher-education/.

151.   *The Credit Rating Controversy*, COUNCIL ON FOREIGN RELATIONS (Feb. 19, 2015), https://www.cfr.org/backgrounder/credit-rating-controversy.

152.   *Id*.

153.   *Id*.

154.   Third party certification has become an important element of non-state based governance. *See What is a Rating Agency?*, CORP. FINANCE INST., https://corporatefinanceinstitute.com/resources/knowledge/finance/rating-agency/ (Last visited July 17, 2018).

155.   On the rise of markets for data see, e.g, Steve Kroft, *The Data Brokers: Selling Your Personal Information*, CBS NEWS (Mar. 9, 2014,), https://www.cbsnews.com/news/the-data-brokers-selling-your-personal-information/; Catlyn Renee Miller*, I Bought a Report on Everything That's Known About Me Online: Data Brokers Collect and Sell People's Personal Information, How Accurate Is What They Find?*, ATLANTIC (June 6, 2017), https://www.theatlantic.com/technology/archive/2017/06/online-data-brokers/529281/; *see also* Jon Brodkin, *Why One Republican Voted to Kill Privacy Rules: "Nobody Has to Use the Internet"*, ARSTECHNICA (April 14, 2017, 1:03 PM), https://arstechnica.com/tech-policy/2017/04/dont-like-privacy-violations-dont-use-the-internet-gop-lawmaker-says/. *But see* Gillian

data-driven governance by individual enterprises,[156] third party management organizations,[157] and the state,[158] have created mini and functionally differentiated structures of data-driven governance that shape the relationship between it and its stakeholders.

In lieu of a uniform system of state centered governance algorithms, one tends to find fracture in implementation, operation, and unity only in the underlying objectives of these new technologies of governance. That unifying objective of coherent systems is grounded in the principles of the "Governance, Risk Management, and Compliance" (GRC) model.[159] This is a model, echoing the 2014 Chinese State Council Guidance, that is defined as "the integrated collection of capabilities that enable an organization to reliably achieve objectives, address uncertainty and act with integrity."[160] What the West has developed are aggregations of related functions in functionally differentiated governance systems. Society, economics, and politics are reordered to suit the needs of efficiency, risk management, and compliance with outside rules (or conformity to outside constraints). These are systems of data-driven management controls. They are manifested as systems for identifying and responding to risks affecting the objectives of specific parties. They serve as systems for identifying and meeting legal and social norm requirements. Lastly, they tend to be applied to and by public and private actors with little coordination.

Data-driven GRC, whether undertaken by the state, enterprises, social organizations, or religion, are manifested by a very precise set of techniques, the way that law is manifested through statute, court cases, regulations, and decisions by designated officials. These include most of the techniques already utilized in Chinese social credit, but by a different set of actors and for a variety of sometimes uncoordinated objectives. Among these are surveillance, reporting (including disclosure for accountability (through law), data collection, markets in data, data repacking and distribution, analytics and relational connections between objectives or principles and behaviors, and reward and punishment systems (inducement, discipline, social behavior management).

B. White, *Two Major Credit Reporting Agencies Have Been Lying to Consumers*, ATLANTIC (Jan. 4, 2017), https://www.theatlantic.com/business/archive/2017/01/credit-scores-cfpb/512162/.

156. On the philosophies of data-driven business management, see STEFAN NIEMEIER, ANDREA ZOCCHI & MARCO CATENA, RESHAPING RETAIL: WHY TECHNOLOGY IS TRANSFORMING THE INDUSTRY AND HOW TO WIN IN THE NEW CONSUMER DRIVEN WORLD (2013).

157. On the use of data by third party management organizations selling either consulting services grounded in data-driven analytics, or ratings, see PIYANKA JAIN & PUNEET SHARMA, BEHIND EVERY GOOD DECISION: HOW ANYONE CAN USE BUSINESS ANALYTICS TO TURN DATA INTO PROFITABLE INSIGHT 146 (2014).

158. On data driven state functions, including review and licensing, see THE PEW CHARITABLE TRUSTS, HOW STATES USE DATA TO INFORM DECISIONS: A NATIONAL REVIEW OF THE USE OF ADMINISTRATIVE DATA TO IMPROVE STATE DECISION-MAKING (Feb. 2018).

159. Mark L. Frigo & Richard J. Anderson, *A Strategic Framework for Governance, Risk, and Compliance*, STRATEGIC MANAGEMENT (FEB. 2009), http://sfmagazine.com/wp-content/uploads/sfarchive/2009/02/STRATEGIC-MANAGEMENT-A-Strategic-Framework-for-Governance-Risk-and-Compliance.pdf.

160. *GRC Standards*, OCEG, https://www.oceg.org/standards/.

In the West, social credit takes on a variety of forms, sometimes, but not always, driven by the private sector and supported by the growth of markets in data.[161] Microchipping individuals is one manifestation, whether undertaken by the state (e.g., Sweden)[162] or any private enterprise (e.g., U.S.).[163] Reports from the United States in 2017 noted how "[o]ne U.S. tech firm is offering to install rice-size microchips in its employees' hands. Once an employee has the chip voluntarily installed, he or she can purchase food in the break room, open doors and log into computers."[164] In 2018, it was reported that Swedes were eager to be microchipped for the convenience of, among other things, public transport.[165]

> The technology itself is not new. In fact, Swedes (and others) have been using microchips this way since at least 2015. . . Even before then, groups of people have been meeting at "implant parties,". . . often organized by larger companies, to hook themselves up. And the chips are similar to the ones veterinarians implant in dogs and cats so that their owners can find them in case they run away again.[166]

The normative implications are fairly plain, suggesting a long-noted progression of changes in the power relationships of labor and other activity.[167]

> However, for Mr. Ben Libberton, a microbiologist working for MAX IV Laboratory, which provides X-rays for research in the southern city of Lund, the danger is real. "At the moment, the data collected and shared by implants is small, but it's likely that this will increase," the researcher said. He is worried that "the more data is stored in a single place, as could happen with a chip, the more risk it could be used against us."[168]

However, the governance implications are equally notable. In lieu of rule based norms constrained by a political system, legitimately constituted, one confronts behavior management (sometimes *pari passu*, and sometimes around or beneath layers of legality) that is grounded in the constructed relationship between data harvesting (on a constant and real time basis), data analytics (imposing an order on the harvest), algorithms pointed toward

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161. Janelle A. Kerlin, *Social Enterprise in the United States and Europe: Understanding and Learning from the Differences*, 17 VOLUNTAS: INT'L J. VOLUNTARY AND NONPROFIT ORGS. 247 (2006).

162. Alexandra Ma, *Thousands of People in Sweden Are Embedding Microchips Under Their Skin to Replace ID Cards*, BUS. INSIDER (May 14, 2018, 8:09 AM), http://www.businessinsider.com/swedish-people-embed-microchips-under-skin-to-replace-id-cards-2018-5.

163. Michelle Fox, *Installing Microchips in Employees Is 'The Right Thing To Do,' CEO Says*, CNBC (July 24, 2017, 6:31PM), https://www.cnbc.com/2017/07/24/installing-microchips-in-employees-is-the-right-thing-to-do-ceo-says.html.

164. *Id*.

165. Alexandra Ma, *supra* note 162.

166. Victor Tangermann, *All the Rage in Sweden: Embedding Microchips Under Your Skin*, FUTURISM, (May 14, 2018), https://futurism.com/sweden-microchip-trend/.

167. SHOSHANA ZUBOFF, IN THE AGE OF THE SMART MACHINE: THE FUTURE OF WORK AND POWER (1989).

168. *Microchips Get Under The Skin Of Tech-Savvy Swedes*, STRAITS TIMES (May 14, 2018), https://www.straitstimes.com/world/europe/microchips-get-under-the-skin-of-tech-savvy-swedes.

objectives (from order to consequences), and systems of decisions, rewards or punishments based on the assessment. In a sense, one travels here from rule of law to assessment and accountability based governance. And, indeed, both GRC and human rights due diligence models are increasingly aligning systems of laws-rules, as outer boundaries within which the real business of governance can be undertaken through data-driven analytics.[169]

The intertwining of the effects of legislation with the forms of accountability through data-driven analytics has become politically important.[170] Consider in this light an issue that for a time caused controversy in the United States: the inclusion of questions about citizenship in the data gathering for the U.S. census. In one sense, the issue was innocuous enough. It focused on two related issues. The first touched on the meaning of data.[171] That is, to what extent could the status of citizenship be understood as a data point in systems of information gathering? The second and more important issue was the recognition of this data point within the product of data harvesting for which it was considered—that is, is data about citizenship valuable as a harvestable fact for the purposes of the census. For example:

> "It's no surprise to see census questions shifting with the times," said Margo J. Anderson, a professor of history at the University of Wisconsin, Milwaukee. "It was a big deal to ask if someone had a radio in 1930. In 1940, not so much," she said. Citizenship questions were regularly on the census until 1950. In 1960, they were removed from the list. "Lots of questions go off the census when they're not very important anymore," Anderson said.[172]

In another sense, however, these questions touched on issues not merely of politics, but of legislation as well. For example, if the obligation under law was to obtain a census of the population, the data point "citizen" might be irrelevant. In a political climate in which immigration status has political effect, then the inclusion of the ostensibly neutral data harvesting question could have effect not just on population counting but on the continued physical presence of a number of individuals. By April 2018, the issue of the authority of the state to harvest this particular data point was before the federal courts—precisely because federal law was to some extent now data-driven[173]. "The lawsuit was filed. . . by a coalition of 17 states, Washington, D.C., and six cities, led by New York, citing a concern that fewer immigrants will respond to the survey and therefore decrease the accuracy of the 2020 census, which determines funding allocation and how political districts are

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169.   *OECD Due Diligence Guidance for Responsible Business Conduct*, OECD (2018), http://mneguidelines.oecd.org/OECD-Due-Diligence-Guidance-for-Responsible-Business-Conduct.pdf.

170.   DORIS A. GRABER & JOHANNA DUNAWAY, MASS MEDIA AND AMERICAN POLITICS (9th ed. 2014).

171.   Leonidas G. Anthopoulos, *Understanding Smart Cities: A Tool for Smart Government or an Industrial Trick*, at 76 (Public Admin. & Info. Tech. Ser. No. 22, 2017).

172.   Catherine E. Shoichet, *Why Putting a Citizenship Question on the Census Is a Big Deal*, CNN (Mar. 28, 2018, 10:49 AM), https://edition.cnn.com/2018/03/27/politics/census-citizenship-question-explainer/index.html.

173.   Complaint, New York et al. v. U.S. Dept. of Commerce, No. 1:18-cv-02921 (S.D.N.Y. Apr. 3, 2018).

drawn."[174] The lawsuit raised questions centered on the construction of data harvesting and its political effect: the relationship of information about citizenship to population, the secondary effects of seeking information in the first place, and the obligation to seek information from individuals versus the obtaining of the information through primary data sweeps without individual interaction.[175] As important were the politics embedded in the seemingly innocuous quest for data. The lawsuit, mirroring the sentiment of some political factions in the United States, argued that "[t]hese well-documented risks of adding a person-by-person citizenship demand to the decennial census are heightened in the current political climate because of President Trump's anti-immigrant rhetoric and this Administration's pattern of policies and actions that target immigrant communities."[176]

These functionally differentiated regimes of data-driven governance have also produced somewhat vibrant markets in data which are rapidly maturing.[177] Data harvesting forms, particularly social media and internet service providers, can serve as platforms for the extraction of data in a variety of forms. Everything from the provision of information to obtain services, to the participation in quizzes and games online produces data that can be sorted, categorized and packaged for sale. The emergence of data markets has long produced calls for political response. These political reactions increase in the face of scandal. Before the 2016 election, Cambridge Analytica was an obscure consulting company funded by the family of conservative hedge fund mogul—and Republican political donor—Robert Mercer.[178] But in the weeks after the 2016 election, rumors began to circulate that Cambridge had played a key role in Donald Trump's victory.[179] Where conventional political advertising uses crude demographic factors like age and ZIP code to target advertising, Cambridge supposedly used a technique called psychographics, which involves building a detailed psychological profile of a user that will allow a campaign to predict exactly what kind of appeal will be most likely to convince any particular voter.[180]

Yet in the private sector, this functional differentiation, fueled by markets in data, has produced a large and complex ecology for data-driven governance. It is well known that enterprises, churches, non-state and state organizations collect information from their members and customers for their own use. News media and third-party organizations use data, sometimes provided voluntarily by the objects of governance, to develop rating systems for institutions in specific economic sectors. Among these, the most well-

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174. Jessica Spitz, *Federal Judge Allows Lawsuit Against Census Citizenship Question to Go Forward*, NBC NEWS (July 3, 2018), https://www.nbcnews.com/news/us-news/federal-judge-allows-lawsuit-against-census-citizenship-question-go-forward-n888761.

175. *Id*.

176. New York et al. v. U.S. Dept. of Commerce, No. 1:18-cv-02921, at 13 (S.D.N.Y. Apr. 3, 2018); *see id*.

177. Dirk Bergemann, Alessandro Bonnatti & Alex Smolin, *The Design and Price of Information*, COWLES FOUNDATION FOR RES. IN ECON. (July 2016), https://cowles.yale.edu/sites/default/files/files/pub/d20/d2049-r.pdf.

178. Hannes Grassegger & Mikael Krogerus, *The Data that Turned the World Upside Down*, MOTHERBOARD (Jan. 28, 2017), https://motherboard.vice.com/en_us/article/mg9vvn/how-our-likes-helped-trump-win.

179. *Id*.

180. *Id*.

known are ratings for educational institutions,[181] some of which generate their own strong opposition.[182] Yet there are others. Third-party originations have used ratings especially effectively in the context of human rights impacts on business activity (e.g., Strauss, 2018; Oxfam, 2016), or product safety and efficiency.[183] For example, Consumer Reports, a non-profit organization, states that it uses its "rigorous research, consumer insights, journalism, and policy expertise to inform purchase decisions, improve the products and services that businesses deliver, and drive regulatory and fair competitive practices."[184] Credit rating agencies, of course, are the most well-known of these consumers of data that effectively sell the products of their algorithms to consumers of that information as well as to the institutions and individuals assessed, who tend to change their behaviors in light of the positive or negative effects of the application of algorithm to the information extracted from them. These have generated controversy, specifically for their effect on governance through data collection and proprietary analytics.[185] And they have produced a response from the state, though not one that eliminates, but merely regulates the markets and processes through which these data-driven analytics are provided for a fee.[186]

Increasingly, data is also monetized—sold to others for profit. Though there have been those who suggest this practice is not wise for business,[187] the generation and monetization of data is itself a burgeoning business usually disconnected from the relationship between primary data harvester and the data providers.[188] Within these data markets, data brokers serve an important (and apparently lucrative) role.

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181.   Shari L. Gnolek, Vincenzo T. Falciano & Ralph W. Kuncl, *Modeling Change and Variation in U.S. News & World Report College Rankings: What Would It Really Take to Be in the Top 20?*, 55 RES. IN HIGHER EDUC. 761 (2014).

182.   *About the Annapolis Group's Statement*, U.S. NEWS & WORLD REPORT (June 22, 2007), https://web.archive.org/web/20070702061309/http://www.usnews.com/blogs/college-rankings-blog/2007/6/22/about-the-annapolis-groups-statement.html#read_more. (last visited Jul. 9. 2018).

183.   *Company Scorecard*, OXFAM (2016), https://www.behindthebrands.org/company-scorecard; *see also* Karsten Strauss, *The World's Most Sustainable Companies*, *2018*, FORBES (Jan. 23, 2018), https://www.forbes.com/sites/karstenstrauss/2018/01/23/the-worlds-most-sustainable-companies-2018/#32d9ceae32b0.

184.   *About Us*, CONSUMER REPORTS, https://www.consumerreports.org/cro/about-us/what-we-do/index.htm.

185.   Martin Mayer, "*Credit Rating Agencies in the Crosshairs*", BROOKINGS (Aug. 31, 2010), https://www.brookings.edu/articles/credit-rating-agencies-in-the-crosshairs/.

186.   For example, the S.E.C. Office of Credit Ratings "assists the Commission in executing its responsibility for investor protection and for promoting capital formation. . . . [and] maintain[s] fair, orderly, and efficient markets, and facilitate[s] capital formation." The Office does this through the oversight of credit rating agencies registered with the Commission as "nationally recognized statistical rating organizations or 'NRSROs.'" *See What We Do*, SEC, https://www.sec.gov/Article/whatwedo.html (last visited Jul. 9. 2018).

187.   *See* Steve Faktor, *Never Sell Data*, FORBES (Mar. 25, 2014), https://www.forbes.com/sites/stevefaktor/2014/03/25/never-sell-data/#3d57f67c259a (but noting a large exception for enterprises in the business of data harvesting and sale).

188.   *See, e.g.*, Alessio Botta, Nunzio Digiacomo & Kevin Mole, *Monetizing Data: A New Source of Value in Payments*, MCKINSEY & CO. (Sept. 2017), https://www.mckinsey.com/industries/financial-services/our-insights/monetizing-data-a-new-source-of-value-in-payments ("Payments providers are already adept at generating customer insights from data. Now, leading firms are using advanced analytics to monetize the data itself."); Lisa Morgan, *8 Ways to Monetize Data*, INFORMATION WEEK (Jan. 22,

Data brokers are entities that collect information about consumers, and then sell that data (or analytic scores, or classifications made based on that data) to other data brokers, companies, and/or individuals. These data brokers do not have a direct relationship with the people they're collecting data on, so most people aren't even aware that the data is even being collected.[189]

But markets for data are not merely built around data brokers.[190] The Internet is already littered with websites extolling the virtues of selling oneself, that is of selling one's own data, to others.[191] This is not merely a matter of permitting the collection of static facts about the individual. Rather some of these forms of monetization effectively plug the individual into data generating machines (the Matrix[192] comes to mind but instead of electricity generated by human bodies, the bodies provide opinion). Marketing research, primarily through focus groups, are an excellent example,[193] aspects of which may be guided by governmental entities.[194] These then can become self-referencing social credit style communities where members can earn points and rise in rank (with privileges) the more they participate or participate in ways deemed useful.[195]

Still, contemporary critics see in the rise of markets for data, and of data-driven governance fractured through functionally differentiated governance

2016), https://www.informationweek.com/big-data/big-data-analytics/8-ways-to-monetize-data/d/d-id/1323932; Barbara H. Wixom and Jeanne W. Ross, *How to Monetize Your Data,* MIT SLOAN MAG. (Jan. 9, 2017), https://sloanreview.mit.edu/article/how-to-monetize-your-data/ ("Companies can take three approaches to monetizing their data: (1) improving internal business processes and decisions, (2) wrapping information around core products and services, and (3) selling information offerings to new and existing markets.").

189.   Yael Grauer, *What Are 'Data Brokers,' and Why Are They Scooping Up Information About You?*, MOTHERBOARD (March 27, 2018), available https://motherboard.vice.com/en_us/article/bjpx3w/what-are-data-brokers-and-how-to-stop-my-private-data-collection (noting three kinds of brokers, people search sites, marketing, and risk mitigation, each of which poses distinct threats to the economic and social position of the individuals from whom data is harvested).

190.   *See, e.g.*, Jon Buck, *How Blockchain Can Help Creators and Consumers Monetize Data*, COINTELEGRAPH (Sept. 25, 2017), https://cointelegraph.com/news/tulips-bubbles-obituaries-peering-through-the-fud-about-crypto ("Blockchain technology allows both consumers and buyers to interact over personal data in a monetized way. The peer-to-peer network system of Blockchain technology provides a platform where data can be sold and bought privately."); Kelly O'Halloran, *How Algebraix Data Helps You Monetize Your Own Data with Advertisers*, BUILTINAUSTIN (Nov. 13, 2017), https://www.builtinaustin.com/2017/11/13/algebraix-data-personal-data-cryptocurrency.

191.   *See* ROBERT SCHEER, THEY KNOW EVERYTHING ABOUT YOU: HOW DATA-COLLECTING CORPORATIONS AND SNOOPING GOVERNMENT AGENCIES ARE DESTROYING DEMOCRACY 58 (2015) ("Whereas what's being sold on the Internet is an illusion of instant knowledge and informed choice that draws you in, the thing itself is your data to be mined by those who want to sell you stuff you most likely didn't even know you wanted.").

192.   THE MATRIX (Warner Bros. 1999).

193.   *See, e.g.*, *10 Consumer Research Companies that Pay Up to $100 an Hour for Your Opinion in Online Focus Groups*, SIDE HUSTLE NATION (Sept. 18, 2017), https://www.sidehustlenation.com/consumer-research-companies-online-focus-groups/.

194.   *See, e.g.*, U.S. DEPT. OF HEALTH AND HUMAN SERVICES, RESEARCH-BASED WEB DESIGN & USABILITY GUIDELINES (2006), https://www.usability.gov/sites/default/files/documents/guidelines_book.pdf.

195.   *See, e.g.,* Sandy McKee, *7 Things to Remember When Choosing Survey Incentives*, SURVEY/GIZMO RESOURCES (Aug. 21, 2015), https://www.surveygizmo.com/resources/blog/survey-incentives-guide.

regimes in the private sphere, a significant risk for the legitimating structures and practices of law based public political societies.[196]

> It's tempting to think this government overreach is purely reserved to China, after all they did just forfeit significant freedom by electing Xi Jinping president for life. This is incorrect thinking. The rest of the world is steps away from trailing the Chinese into a surveillance state . . . With incredible data collection, the plumbing is already in place for such a system to take hold. Our tech companies catalogue large quantities of data on everyone. As we saw with Cambridge Analytica in the 2016 election, this data can be used to steer particular viewpoints; it's not a far cry to imagine information being used to control viewpoints.[197]

Others have begun to see in these uncoordinated fractured movements toward the exploitation of data through analytics advanced under the guidance of algorithms, the possibility of a Western, markets driven, social credit like governance framework emerging. "These systems are sprawling, often randomly connected, and often beyond logic. But viewed from another angle, they are also the potential constituent parts of comprehensive social credit systems, awaiting the moment at which they will be glued together."[198] The solution, often advanced, is for greater governmental oversight,[199] as well as algorithmic accountability,[200] and the management of the process of data searching itself.[201] Yet, ironically, it is accountability itself that may lend itself quite powerfully to the logic and mechanics of data-driven systems, of learning algorithms, and of the neutrality of facts produced from data harvesting without conflicts of interest.[202]

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196.   FRANK PASQUALE, THE BLACK BOX SOCIETY: THE SECRET ALGORITHMS THAT CONTROL MONEY AND INFORMATION (2015).

197.   Tyler Grant, *The West Could Be Closer to China's System of 'Social Credit Scoring' Than You Think*, THE HILL (May 7, 2018), http://thehill.com/opinion/technology/386524-the-west-could-be-closer-to-chinas-system-of-social-credit-scoring-than; *see also* Anthony Davenport, *America Isn't Far Off from China's 'Social Credit Score'*, OBSERVER (Feb.19, 2018, 6:30 AM), http://observer.com/2018/02/america-isnt-far-off-from-chinas-social-credit-score/ ("Data aggregators are able to build a very sophisticated profile of how you spend and sell that profile to advertisers looking to find people just like you. The credit bureaus keep track of how you pay your bills—and manage your available credit—and sell it to companies that assign you a score that lenders then use to determine how reliable you'll be about paying off a new line of credit.").

198.   John Harris, *The Tyranny of Algorithms Is Part of Our Lives: Soon They Could Rate Everything We Do,* THE GUARDIAN (Mar. 5, 2018), https://www.theguardian.com/commentisfree/2018/mar/05/algorithms-rate-credit-scores-finances-data.

199.   For example, "Basic principles of due process, fair play, and anti-discrimination must be brought into the digital age or abandoned to history." *See* Frank Pasquale, *Why Europe Needs a Digital Regulator*, THE GUARDIAN (Apr. 27, 2015), https://www.theguardian.com/technology/2015/apr/27/digital-regulator-europe-google-facebook-amazon-apple.

200.   Frank Pasquale & Sam Halesby, *Digital star chamber: Algorithms are producing profiles of You. What Do They Say? You Probably Don't Have the Right to Know*, AEON, (Aug. 18, 2018), https://aeon.co/essays/judge-jury-and-executioner-the-unaccountable-algorithm (last visited July 9, 2018).

201.   Search engine algorithms that perpetuate stereotypes and racist beliefs. *See* SAFIYA UMOJA NOBLE, ALGORITHMS OF OPPRESSION: HOW SEARCH ENGINES REINFORCE RACISM (2018).

202.   Scott, *supra* note 18.

B. NON-STATE RATING SYSTEMS FOR CSR COMPLIANCE

It may be useful at this point to illustrate the ways in which Western versions of social credit—of providing *ratings grounded in targeted data harvesting, proprietary algorithms, and coordinated incentives and punishments*—have become important regulatory elements in the societal field. Rating systems as mechanisms for disciplining behavior have become important instruments of regulatory governance in the non-state sector in the West. They have become especially useful in the context of the management of a framework for enterprise corporate social responsibility (CSR). In this context, non-state actors have begun to develop and implement private systems of rating the CSR performance of large enterprises. The effect is meant to be the same as in other social credit systems—to induce the objects of rating to change their operation and their governance structures to ensure a higher rating. In other systems, that inducement to comportment includes avoidance of criminal charges or access to financial markets.[203]

The specific context is the offer by EcoVadis' First Annual CSR Performance Index 2017 of a system for ranking and thus for managing the corporate social responsibility behaviors of enterprises.[204] It suggests as well that regulation continues to move from formal law making to the structures of incentives and markets for regulatory devices based on data, algorithms, and reward. It also suggests that, in the contest for the elaboration of the CSR and human rights responsibilities of enterprises (in the West and along global production lines at least), the driving force for elaborating norms and structures will occur beyond the legal-regulatory duty systems of states and appears to be driven by the informal mechanisms of societal responsibility, rather than the more formal and rigid legal structures of state duty.

The CSR Performance Index is related to the CSR framework approach of ISO 26000, an international standard developed to help organizations effectively assess and address their social responsibilities.[205] The CSR assessment applies an algorithm to a very specific set of data to produce comparable results which can be placed on a scale of the crafting of the evaluating institution. In this case EcoVadis notes:

> A CSR assessment is an evaluation of how well a company has integrated the principles of CSR into their business. An assessment program is a first step into an ongoing monitoring process. The objective of the assessment is to get a clear picture of your Corporate Social Responsibility practices (i.e. environment, social, ethics, supply chain). The assessment results will enable you to understand how your company is positioned, but you can also use the assessment results to communicate your CSR commitment to your stakeholders.[206]

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203. Backer, *supra* note 24.

204. *What Is a CSR Assessment 2017?*, ECOVADIS, https://www.ecovadis.com/us/csr-assessment (last visited Jul. 9, 2018).

205. LEONARD J. BROOKS& PAUL DUNN, BUSINESS & PROFESSIONAL ETHICS 143(CENGAGE LEARNING, 2011).

206. ECOVADIS, *supra* note 204.

It is here that the ISO 26000 framework is especially useful.[207] EcoVadis builds its data harvesting framework on four principal categories: environment, social, ethics, and sustainability.[208] It subdivides data categories for environment (operations and product related) and social (human resources and human rights). These categories and subcategories can then be subdivided in a way that permits efficient data gathering.

The evaluative algorithms are then molded around the data to specific ends:

> [t]he CSR Assessment should show the main risks and opportunities and give a thorough analysis of the following: How well is the company's strategy in responding to emerging opportunities and issues? Where is the company strong and weak in regards to CSR? These are important information which can be used as a selling point to stakeholders.[209]

And the ultimate objective, of course, is tied to the product of the algorithm—the production of standards against which compliance can be measured, and the evaluation of mitigation methodologies of managing CSR risk. That management, of course, is tied quite tightly to the data set itself. It is the data universe that defines the universe of risk; it is the algorithm that defines its effect. The product of that combination—the structuring and assessment of risk—produces its own operational implications. The most important of these is the direction that risk measures give toward the focus of compliance and understanding of the character of its reduction. *Environment, social, ethics, and sustainability factors are important because these are the things that are measured*. The way they are measured (what data is harvested versus what data is ignored) determines the character of the mitigation directed to reduce risk and elevate performance as measured against the CSR Index. *Algorithm, then, points to the modalities of operational changes responsive to net positive changes in measurement*. To induce an enterprise to become more responsive to CSR issues in the way it orders its operations and the way it considers factors in making decisions, one has to measure those CSR issues in a way that produces incentives toward particular behaviors.

It is precisely that which EcoVadis, along with others in the West, now attempt. This is not a criticism—just a suggestion of what this project manifests. It is a manifestation of the move away from law-regulatory structures, and from the state as the driving force in commanding behavior norms, to a system in which the state is an actor. However, the driving force may well be the private sector itself, and the method may be the provision of credit and assessment systems that may be used to assess behavior and

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207. On the utility of ISO 26000 in other contexts, for example: "ISO 27002 is a structured and internationally recognized methodology that should help an enterprise to develop better management of information security on a continuing basis." ROBERT R. MOELLER, EXECUTIVE'S GUIDE TO IT GOVERNANCE: IMPROVING SYSTEMS PROCESSES WITH SERVICE MANAGEMENT, COBIT, AND ITIL (2013).

208. *Id*.

209. *Id*.

change it. In *place of the state and law*, behavior (including CSR-based corporate governance) is also now driven by the creation of *markets for assessment*. But the market does not produce the norms underlying the choice of data and algorithm. Rather, private enterprises (and some states) build these data and algorithmic approaches by drawing on national and international normative standards. EcoVadis drew in part on ISO 26000. One can as well draw on the International Bill of Human Rights, as embedded in the corporate responsibility pillar of the U.N. Guiding Principles for Business and Human Rights (2011).[210] The point is that the societal regulation that arises builds on an effective coordination between private actors as facilitators and system builders with states and international organizations as generators of legitimate expressions of norms. The difference between these efforts and those of China is that China would interpose a set of state-private cooperative arrangements overseen by the state and crafted to advance state policy. These arrangements might be viewed as essential to the objective to institutionalize a large number of social credit systems. It can perhaps be better understood as substituting public regulatory governance systems *in lieu of the approach of the West,* which relies heavily on the private actor, the private standard, and the market for determining the value and legitimacy of ranking based assessments, including the power of such assessment systems to influence behavior in response to its market power.[211]

C.   FROM INFORMATICS TO SOCIETAL LEADERSHIP—THE ROLE OF DATA IN GOVERNANCE AND THE MANAGEMENT OF POPULATIONS

The discussion above suggested the contours of the emerging issues attached to the apparently unstoppable movement from government to governance and from law to algorithm. That discussion also suggests the inability of current analytical frameworks to effectively engage with this movement in ways that preserve societal meta values in the face of changing tastes for the methodologies of collective behavior management. It also suggested the difficulties of theorizing these movements in the West where fractures of power, of norms, and of the sources of governance power has made it difficult to target the manifestations of data-driven governance. Still, it may be possible to begin to outline the structures of "social credit" governance and its challenges.

A social credit system, its ratings, and judgements (reward/punishment structures) are grounded in targeted data harvesting, proprietary algorithms, and coordinated incentives and punishments. There may be some glory in worrying about the algorithms that produce the ratings. Yet

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210. *See generally* Human Rights Council Res. 17/4, Rep. of the Hum. Rts. Council, 17th Sess., June 16, 2011, U.N. Doc. A/HRC/RES/17/4 (July 6, 2011); Special Rep. of the Sec'y Gen., Guiding Principles on Business and Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework, Hum. Rts. Council, U.N. Doc. A/HRC/17/31 (Mar. 21, 2011) [hereinafter UN Guiding Principles].

211. About the nature and effectiveness of that "signaling," *See* Christopher Marquis & Cuili Qiang, *Corporate Social Responsibility Reporting in China: Symbol or Substance?*, 25 ORGANIZATIONAL SCI. 127, 127–48 (2013).

algorithms are merely a function of the choices of data to harvest.[212] And robust harvestable data is likely the most time consuming and expensive part of any data-driven system. In that regard, it is worth considering the way that the data harvesting element of building social credit systems are being socialized within advanced Western liberal democracies. To that end, the effectiveness of modern television programming, especially a new series from CBS, "Wisdom of the Crowd," offers some useful insights.[213]

In China, social credit is a term for a system of governance grounded in the construction of ratings for virtually any activity,[214] ratings that then become an instrument of governance, providing triggers for benefits, incentives, rewards and punishments. Where the ratings are made transparent, it also permits devolution of governance effects from the state to the masses—the ratings of universities or restaurants provide a good example of the use of markets and mass choices grounded in the effects of ratings. Social credit is practiced all over the world.[215] Outside of China, the drivers of social credit tend to be private enterprises—for everything from rating credit to the rating of the CSR effectiveness of enterprises.[216]

But ratings are only part of the story. *A social credit system, and its ratings, are grounded in targeted data harvesting, proprietary algorithms, and coordinated incentives and punishments*. Any system grounded in management of behavior requires data. That data requirement is actually of three sorts.

The first is to identify the data that is useful for harvesting and conversely to identify data that may be ignored. Those choices are ideological and political—far more so than the production of the algorithms through which data is processed into useful governance objects. It requires consensus on the identity of "facts" and its distinction from conclusion and opinion.[217] That is easier said than done. Consider a system that requires data identifying weeds—the concept of weed is both arbitrary and a function of ideologies of domestic landscaping that varies from place to place. Other "facts" become more difficult—"race," "ethnicity," and "religion" for example.[218]

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212. There is a rich literature on the character and aspects of the algorithm. *See, e.g.*, SOFTWARE STUDIES: A LEXICON 18 (Matthew Fuller et al. eds., 2008).

213. *Wisdom of the Crowd*, CBS, https://www.cbs.com/shows/wisdom-of-the-crowd/ (last visited July 11, 2018).

214. Guowuyuan Guanyu Jiaqiang Zhengwu Chengxin Jianshe de Zhidao Yijian (国务院关于加强政务诚信建设的指导意见) [Guiding Opinion concerning Improving the Development of Sincerity in Governmental Affairs] (promulgated by the State Council, Dec. 30, 2016), http://www.gov.cn/zhengce/content/2016-12/30/content_5154820.htm (last visited Jul. 9, 2018).

215. ALEXANDER KLIMBURG, THE DARKENING WEB: THE WAR FOR CYBERSPACE (2017).

216. Dameri, et al., *supra* note 142.

217. Trevor F. Pinch & Wiebe E. Bijker, *The Social Construction of Facts and Artifacts: Or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other*, *in* THE SOCIAL CONSTRUCTION OF TECHNOLOGICAL SYSTEMS: NEW DIRECTIONS IN THE SOCIOLOGY AND HISTORY OF TECHNOLOGY 11, 18 (Wiebe E. Bijker, Thomas P. Hughes & Trevor Pinch eds., 2012).

218. Carlo A, Pedrioli, *Respecting Language as Part of Ethnicity: Title VII and Language Discrimination at Work*, 27 HARV. J. RACIAL & ETHNIC JUST. 97 (2011).

The second is to collect data in ways that do not compromise their utility (double counting, fictitious, or fabricated facts).[219] This is also more difficult than it might appear. When the United States produced a government social credit system for public schools grounded in ratings based on standardized test taking, it was not long before it became necessary to devote resources to policing against fraud as school districts, whose prestige and income would depend on their performance rating, sought to "manage facts" in their favor.[220]

The third is to collect data.[221] Data does not flow like a river from its source to its end, to be drawn on by those who approach its banks to the melodies of *Ma Vlast*.[222] Data must be extracted from its sources. Its production may be compelled—usually by the state through disclosure regimes. It may be bought, usually by private actors, and by buying the price can be anything from access to information (reports and the like in exchange for a name and e-mail) to the actual purchase of informality for money.[223] Or like deer in the forest, it may be hunted, or like truffles in that same forest, collected. One might hire truffle pigs or other intermediaries, but data harvesting is an active endeavor in every case.

But what if one could induce the masses to voluntarily provide data? Restaurant reviews provide a good example. It is in people's interest to share experiences about dining in particular places (producing data) as long as they might be able to access the ratings that result from the aggregation of that data contribution (after processed through an algorithm into a rating and made available as raw data). The same theory drives the data collection of data consolidators like TripAdvisor.[224] These sites provide benefits to both data provider and data harvester. The data harvester can sell a service enriched by the ratings that can be posted which are themselves the product of its customer's willingness to provide data about the products that the data harvester sells.

These closed loop systems of private social credit work well enough. But is it possible to socialize the masses, or even mass democracy as a collective, to embrace this pattern of data disclosure beyond these immediately self-serving, closed-loop systems? Would it be possible for the state to develop systems for the enforcement of laws (criminal and regulatory) that depend on intelligence by inducing the masses to serve as positive contributors of data necessary for enforcement or regulation? The answer, in Western liberal democracies, may depend on the ability of the great culture management

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219. ZHAO FENG & LEONIDAS GUIBAS, WIRELESS SENSOR NETWORKS: AN INFORMATION PROCESSING APPROACH 48–51, (2004).

220. Allie Bidwell, *Atlanta Scandal Could Be the Tip of a "Test Cheating Iceberg"*, U.S. NEWS & WORLD REPORT (Apr. 2, 2015), https://www.usnews.com/news/articles/2015/04/02/11-former-atlanta-educators-convicted-in-standardized-test-cheating-scandal.

221. SCHAUER, *supra* note 126.

222. Chris Ioannou, *Bedrich Smetena - Ma Vlast (James Levine - Vienna Philharmonic Orchestra)*, YOUTUBE (Dec. 21, 2014), https://www.youtube.com/watch?v=wgU968SRwwk.

223. *The Credit Rating Controversy*, *supra* note 151.

224. TripAdvisor was subject to a scandal respecting the integrity of its own data used to induce consumer choice. *See* John Herrman, *Cambridge Analytica and the Coming Data Bust*, N.Y. TIMES (Apr. 10, 2018), https://www.nytimes.com/2018/04/10/magazine/cambridge-analytica-and-the-coming-data-bust.html.

machinery of Western society—its television, movies and other related media—to develop a narrative in which such activity is naturalized within Western culture.[225]

One might get the sense of this possibility, of the socialization of norms that naturalize a societal obligation to actively and affirmatively provide data (to the state or to a private enterprise exercising state or market functions) by considering the premise of a new television show that is set to debut on the CBS television network. That show, "Wisdom of the Crowd," is based on a premise that is irresistible but also challenging for contemporary (or traditional) social ordering.

> Written by [Ted] Humphrey, Wisdom of the Crowd is based on the Israeli format of the same name. Inspired by the notion that a million minds are better than one, it centers on a tech innovator who creates a cutting-edge crowd-sourcing hub to solve his own daughter's murder, as well as revolutionizing crime solving in San Francisco.[226]

Humphrey executive produces with Keshet's Avi Nir, Alon Shtruzman, Peter Traugott and Rachel Kaplan, Dror Mishani and Shira Hadad. CBS Television Studios, where Humphrey is under an overall deal,[227] produces through his Algorithm Entertainment banner in association with Universal Television, where Keshet Studios has a deal.[228]

There is a certain self-consciousness about the way that the television series may contribute to societal narratives and the normalization of behavior.

> "Honestly, the idea scared the hell out of me," said EP/showrunner Ted Humphrey who worked with Keshet in adapting the Israeli series for a network audience. "In the last year we've all encountered the ying and yang of the internet in the way it can be used as a vehicle for human collaboration." Humphrey said crowdsourcing is beginning to rear its head among police forces across the country, and the show, in addition to its human drama will deal with the online means of how it can be flawed and helpful in solving crimes.[229]

The story is pitched as a self-help narrative ("'The courts can only do so much. The rest is up to us.' CBS has just released the first preview for the upcoming TV series *Wisdom of the Crowd*.")[230] And yet the more interesting

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225.   LEIGH H. EDWARDS, THE TRIUMPH OF REALITY TV: THE REVOLUTION IN AMERICAN TELEVISION (2013).

226.   Denise Petski, *CBS Orders 'Wisdom of the Crowd' Crime Drama Pilot Based on Israeli Format*, DEADLINE HOLLYWOOD (Feb. 9, 2017), http://deadline.com/2017/02/cbs-orders-wisdom-of-the-crowd-drama-pilot-based-on-israeli-format-good-wife-writer-producer-1201906849/.

227.   Nellie Andreeva, *"Good Wife" Writer-Producer Ted Humphrey Signs Overall Deal with CBS TV Studios*, DEADLINE HOLLYWOOD (Apr. 25, 2012, 3:19pm), http://deadline.com/2012/04/good-wife-writer-producer-ted-humphrey-signs-overall-deal-with-cbs-tv-studios-261772/.

228.   Petski, *supra* note 228.

229.   *Id.*

230.   Jessica Pena, *Wisdom of the Crowd: Jeremy Piven Is Solving a Murder in New CBS Drama (Video)*, TV SERIES FINALE (May 17, 2017), https://tvseriesfinale.com/tv-show/wisdom-crowd-jeremy-piven-solving-murder-new-cbs-drama-video/.

narrative is the legitimacy of creating a platform through which data may be harvested through voluntary disclosure because it may be the right thing to do. That right thing to do may involve the advancing of justice (this is a crime solving drama to be sure). But it can be expanded to almost anything (e.g., find and catch lawbreakers of any kind, expose corporate misconduct, expose the administrative misconduct of officials, catch your neighbor's dog defecating in your yard, etc.).

The premise is not a leap into unknown territory. Western mass culture has been herded toward the acceptance of the value of this responsibility for some time. That herding comes from two quite distinct directions. *In the first,* there is entertainment and pleasure in real time participation in reality and talent shows and contests. These include the call-in features of shows like *The Voice* with a call in or online voting feature for contestants.[231] Mass society has been trained to share their views—that is to provide data—as an aspect of participatory mass entertainment. *In the second*, there is participation in the exaction of justice against criminals—a premise already quite close to that of "Wisdom of the Crowd."[232] Shows like "America's Most Wanted" illustrate this approach.

> In this series, John Walsh, the father of a murdered child hosts this show that illustrates crime stories which have led to the capture of hundreds of fugitives from the law. With as much luridness and accuracy as possible, various crimes are dramatically recreated with an appeal for any viewer with information as to the crime and the perpetrators to call the show and the authorities and help the cause of justice.[233]

The difference is that "Wisdom of the Crowd" *introduces algorithm to data collection to make the probability of meeting objectives more likely* (it is indeed interesting that Mr. Humphrey's company is named Algorithm Entertainment).[234] It is a story of the value of regulatory governance as a partnership between the state and its polity. It suggests the importance of state private cooperation in the construction of real time governance systems that draw on law but are grounded in management and administration to secure behavior norms——reward the good, punish the bad, and enhance social order to the benefit of all. But in Western fashion, it will also expose some of the difficulties and challenges. But those difficulties and challenges will likely touch on administrative discretion and on the algorithm to be effective. It will be interesting to see the extent to which it celebrates a change of societal norms that encourages ordinary individuals to part with information as a social duty. And that, more than anything else, will provide a strong grounding for any social credit, rating, or regulatory management

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231.   *The Voice*, NBC, https://www.nbc.com/the-voice (last visited July 11, 2018).

232.   Pena, *supra* note 232.

233.   *America's Most Wanted*, IMDB, http://www.imdb.com/title/tt0094415/ (last visited Jul. 9, 2018).

234.   Han biru (韩碧如), *Zhongguo Xinyong Pingfen Jihua Chuxian Wenti* (中国"社会信用"评分计划出现问题) [Issues of China's Social Credit Rating Plan], FᴛCʜɪɴᴀ (July 5, 2017), http://www.ftchinese.com/story/001073280?archive.

system grounded in *targeted data harvesting, proprietary algorithms, and coordinated incentives and punishments*.

Taken together, one can begin to sketch the parameters of the normative discussion around data-driven governance by algorithm. Those parameters are to some extent substantially different from that which has grown up around systems of law over the last several centuries. And that is disconcerting. Yet, if the meta objectives remain the same—fairness, legitimacy, shared values, predictability, uniform application, protection against arbitrary action, and the like—then it is possible to reframe the discussion in ways that touch on the conceptual heart of algorithmic governance. These can be divided into five basic challenges, each of which are deeply embedded within the construction of both Chinese social credit and the more fractured versions of the West, and each of which begs further deep engagement within national contexts.

The first includes system construction challenges. China seeks to develop a singular and coherent approach to data-driven analytics and the algorithms that can be used to manage society in all of its aspects. This effort to substitute deep systems of analytics overseen by political officials and technical administrators for the conventional deep systems of law and regulation overseen by bureaucrats and judges is unique. Should it succeed, it will revolutionize governance theory and potentially serve as a framework for the organization of developing states.[235] In the West, the path to the development of data-driven algorithmic governance is as fractured as the political systems in the West in the shadow of globalization.[236] The absence of singularity in construction implies an absence of singular standards in equal measure. There is little movement at the moment for the development of consensus positions on the scope and operation—much less the meta-principles, the rule of law type foundations—for such governance systems across functionally differentiated jurisdictions.[237] As important are the issues of data harvesting and integrity within such fractured systems.[238]

These suggest a number of subsidiary challenges which were sketched above and now summarized. Among them, the absence of any effective coordination of management of markets for data and data-based management systems is quite prominent, and one that suggests a parade of horribles in which the autonomous individual is always the victim.[239] Little protection exists for data sources and individuals whose information is harvested. There remains the issue of data integrity and protection. Pulling in opposite directions are the idea of of data-driven accountability flowing from the free

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235. RANDALL PEERENBOOM, CHINA MODERNIZES: THREAT TO THE WEST OR MODEL FOR THE REST? (2007).

236. Solove, *supra* note 135.

237. *See* Benjamin Ziemann, *The Theory of Functional Differentiation and the History of Modern Society: Reflections on the Reception of Systems Theory in Recent Historiography*, 13 SOZIALE SYS. 220, 220–29 (2007); *see also* Jerry S. Cloyd, *Functional Differentiation and the Structure of Informal Groups*, 5 THE SOC. Q. 243, 243–47 (1964).

238. Backer, *supra* note 24.

239. Leif Weatherby, *Delete Your Account: On the Theory of Platform Capitalism*, L.A. R. BOOKS (Apr. 24, 2018), https://lareviewofbooks.org/article/delete-your-account-on-the-theory-of-platform-capitalism/#!.

access to information and the need (political) to preserve the privacy, informational autonomy, and integrity of individuals. In that context, much regulation is fractured along market segment lines (e.g. credit reporting, social media, etc.). Perhaps it ought to embed the societal as well, in the way that societal regulation has been embedded in standards of business and human rights.[240] And of course, issues of integration with political and systems standards outside of the U.S. (e.g., EU and China), or coordination with national law in systems in which data-based governance has been privatized (privacy, disclosure, business rules, etc.) remains a central challenge.

The second includes challenges concerning political values. Political values are deeply intertwined with data and data-driven systems. Politics—and its ideological drivers—serve as the foundations for assessing decisions about the entire process of data, its analytics, and the algorithms derived from them. Yet, where data itself is generated through markets, and in the absence of societal consensus about the differentiation of data from judgment or on the metrics for assessing data generation and the parameters of analytics, the traditional contentions inherent in the formation of policy choices and the legal structures that support them will be transferred to the development of data, its analytics, and the algorithms that are meant to reflect judgment. This is the inverse of the problem of data-driven politics that has been much in the news.[241] And it is hardly a dehumanized system of surveillance economics, though there is merit in considering this characteristic at the margins.[242] It is the problem of economics-driven politics, and politics-driven data. There is little by way of passivity here. What some have taken for passivity in the face of the algorithm may instead be better understood, as suggested above, as the reconstitution of humanity from individuals with souls moving toward collective characteristics, to the reconstitution of individuals as the aggregation of data-driven traits that matter. But these are not inserted into passive humans but embraced by those who see in the "bargain" an advantage that suits their interests (individual or collective). And therein lies the heart of the political issue—bound up in the legitimacy of such bargains and their consequences. Yet the West has had much practice in this area. In some ways, it mirrors the more ancient issues of reconstitutions of individuals on the basis of status—status based on rank, class, race, religion, and the like.[243]

The third includes a cluster of managerial challenges. One understands, however much one may object to the cultures and practices of the

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240. Kate Crawford & Catharine Lumby, *Networks of Governance: Users, Platforms, and the Challenges of Networked Media Regulation*, 2 INT'L J. TECH. POL'Y. & L . 270, 270–82 (2013); *see also*, Larry Catá Backer, *Governance Without Government: An Overview, in* BEYOND TERRITORIALITY: TRANSNATIONAL LEGAL AUTHORITY IN AN AGE OF GLOBALIZATION 87–123 (Günther Handl, Joachim Zekoll & Peer Zumbansen eds., 2012).

241. David Z. Morris, *Which Side of the Aisle Benefits from Data-Driven Politics?*, FORBES (Mar. 27, 2016), http://fortune.com/2016/03/27/data-driven-politics/.

242. SHOSHANA ZUBOFF, THE AGE OF SURVEILLANCE CAPITALISM: THE FIGHT FOR A HUMAN FUTURE AT THE NEW FRONTIER OF POWER (2018).

243. *See* R.H. Graveson, *The Movement from Status to Contract*, 4 Mod. L. Rev. 261, 261–72 (1941); *see also* Katharina Isabel Schmidt, *Henry Maine's "Modern Law": From Status to Contract and Back Again?*, 65 AM. J. COMP. L. 145–86 (2017).

administrative bureaucracies of modern regulatory states,[244] even within their national contexts.[245] These include a need for coherence across a vast private and governmental sphere within both public and private spheres.[246] Beyond that, there is even more need for coordination between public and private spheres of data-driven governance. Yet the study of the cultures of regulation across platforms, and within data analytics, remains a mystery in which even the identities of the regulators may be shrouded in mystery.[247] Within regulatory structures of data-driven analytics—whether a unified public Chinese model or the fractured and privatized Western model—the identity of the new regulator, the analyst, and the creator of analytics and algorithms, replaces the administrator, the hearing officer, and the policy analyst. Mediating the roles of the bureaucrat, the policy maker, the politician, and the judge will require a substantial resorting, and likely a new vocabulary. And it may require balancing dual regulatory systems, one grounded in government, and the other in economy. Within this new managerial universe, things like abuse of discretion may well be transformed into principles of market abuse and algorithmic integrity.[248] And in this new framework, the extent of governmental oversight is unclear.

The fourth includes technical challenges. These are fundamental issues that touch on the integrity of the system in its operative capacity. Critical areas include data harvesting, retention, and protection. It is in this context that big-data analytics and artifical intelligence become important elements. Both are meant to be means to an end. If regulation has been transformed from technique to regulatory substitute, then artifical intelligence and big data analytics become the techniques necessary to realize the governance objectives of analytics and the judgments inherent in algorithms. There are two issues here worth considering. The first addresses capacity.[249] The second touches on ideology and politics.[250] The Chinese and private Western enterprises (along with public security apparatuses) are most interested in

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244.   Ronald Pestritto, *The Birth of the Administrative State: Where It Came From and What It Means for Limited Government,* HERITAGE FOUNDATION, (Nov. 20, 2007), https://www.heritage.org/political-process/report/the-birth-the-administrative-state-where-it-came-and-what-it-means-limited (last visited Jul. 9. 2018).

245.   Martin Painter & Wong Shiu-fai, *Varieties of the Regulatory State? Government-Business Relations and Telecommunications Reforms in Malaysia and Thailand,* 24 POL'Y & SOC. 27, 27–52 (2005).

246.   Close attention to the institutional setting is necessary with a view towards fostering accountability, transparency and trust. Regulatory authorities are not without risk, as they need to be protected from the risk of capture and also need to receive clear objectives and missions to fulfill their role within the regulatory framework. *See Oecd Due Diligence Guidance For Responsible Business Conduct*, *supra* note 170.

247.   Eubanks, *supra* note 138.

248.   Cary Coglianese & Christopher S. Yoo, *The Bounds of Executive Discretion in the Regulatory State*, 164 U. PA. L. REV. 1587, 1587–1606 (2016), http://scholarship.law.upenn.edu/faculty_scholarship/1715.

249.   Jasmine Collins, Jascha Sohl-Dickstein, & David Sussillo, *Capacity and Trainability In Recurrent Neural Networks*, ARXIV 4–7 (2017), https://openreview.net/pdf?id=BydARw9ex.

250.   Scott Shane & Daiesuke Wakabayashi, *The Business of War': Google Employees Protest Work for the Pentagon*, N.Y. TIMES (Apr. 4, 2018), https://www.nytimes.com/2018/04/04/technology/google-letter-ceo-pentagon-project.html.

capacity.[251] The traditional apparatuses of government—legislatures, bureaucracies, and the elites who mediate between them and the masses—tend to be more focused on ideology, usually in the form of resistance, control, or domestication.[252]

The last set of challenges include a number of ideological challenges for algorithm construction and deployment. These are generally manifested, as in law, in the challenges of interpretation. Every choice of data to harvest and that to ignore, every decision driving the character and scope of analytics, and the very construction of the algorithm (and the system of rewards and punishments based on algorithmic judgement) evidence underlying choices driven by ideology. And ideology is driven by culture,[253] politics,[254] and economics.[255] And yet, the ideology of data and its analytics remain unexplored territory, or efforts in that direction might be understood to violate cultural and ideological taboos. The analytics of race and IQ provides a good example.[256]

Adding meaning to data may be difficult without confronting society's moral flames, however. Politics tends to refine and contain those fires in politically useful ways. It is not clear how data-driven, analytics-based governance will construct similarly effective constraints—or if it is constituted to engage in such building. Beyond that, the underlying ideologies that drive data-driven governance can create paradoxes. One has been suggested already—the drive toward transparency and data harvesting is at the heart of the idea of accountability, against the ideology of human autonomy. Both, ironically, sit at the core of the great ideological project of human rights. One speaks today of the bias of algorithms as though it is the algorithm that has a consciousness.[257] In machine learning, the teacher is

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251. Robyn Dixon, *China Plans to Dominate AI, with a Vanguard of Robotic Doctors Like 'Biomind'*, L.A. TIMES (Jul. 6, 2018, 3:00 AM), http://www.latimes.com/world/la-fg-china-ai-20180706-story.html.; *see also* Robert W. Button, *Artificial Intellegence and the Military*, RAND: THE RAND BLOG, https://www.rand.org/blog/2017/09/artificial-intelligence-and-the-military.html (last visited Jul. 9, 2018).

252. European Commission Press Release IP/18/3362, Artificial Intelligence: Commission Outlines a European Approach to Boost Investment and Set Ethical Guidelines (Apr. 25, 2018), http://europa.eu/rapid/press-release_IP-18-3362_en.htm; Alan Boyle, *Policy Experts Trade Ideas for Intelligent Ways to Regulate Artificial Intelligence*, (Apr. 10, 2018), GEEKWIRE, https://www.geekwire.com/2018/policy-experts-debate-regulate-artificial-intelligence-intelligently/ (last visited Jul. 9, 2018).

253. Eubanks, *supra* note 138.

254. Lucas D. Introna, & Helen Nissenbaum, *Shaping the Web: Why the Politics of Search Engines Matter*, 16 THE INFO. SOC. 169, 169–85 (2000).

255. John Bellamy Foster & Robert W. McChesney, *Surveillance Capitalism: Monopoly-Finance Capital, the Military-Industrial Complex, and the Digital Age*, MONTHLY REV. (July 1, 2014), https://monthlyreview.org/2014/07/01/surveillance-capitalism/; Peter Sondergaard, *Big Data Fades to the Algorithm Economy*, FORBES (Aug. 14, 2015), https://www.forbes.com/sites/gartnergroup/2015/08/14/big-data-fades-to-the-algorithm-economy/#783f6ba751a3.

256. "You can talk about the genetics of intelligence. But stop implying they're the same thing. Connecting intelligence to race adds nothing useful. It overextends the science you're defending, and it engulfs the whole debate in moral flames." *See* William Saletan, *Stop Talking About Race and IQ: Take It from Someone Who Did*, SLATE (Apr. 27, 2018, 1:42 PM), https://slate.com/news-and-politics/2018/04/stop-talking-about-race-and-iq-take-it-from-someone-who-did.html.

257. "The teacher decides what questions to ask, and tells learners what matters." Rahul Bhargava, *The Algorithms Aren't Biased, We Are*, MIT MEDIA LAB (Jan. 3, 2017), https://medium.com/mit-media-lab/the-algorithms-arent-biased-we-are-a691f5f6f6f2.

responsible for "feature selection" — deciding which pieces of the data the machine is allowed to use to make its decisions.

One speaks as well of the algorithm as incantation. The cultural construction of algorithms is at a very early stage of research and requires more.[258]. Its invocation serves as an invitation to passivity, even as it appears in the role of a vampire acquiring life by sucking out the informational lifeblood of the individuals on which it feeds, and by feeding, converting them into its own followers. All of this, of course, raises the fundamental question that law systems themselves have never adequately answered. In a system in which decision-making and decision makers are privileged, how can society constitute a mechanism to monitor the monitors—or in this case, create data-driven analytics to discipline the construction of systems of data-driven analytics and the governance they may oversee? And yet the fundamental ideology that emerges, despite the hand wringing, is one that has been aggressively embraced by all sectors of conventional political society—an ideology of accountability built on measurement, assessment, and reward. That ideology—grounded in the language of economic efficiency and wealth production, human rights and personal autonomy, politics and systemic integrity—will shape the structures of governance of enterprises, of states, and inevitably, of law.

The development of data-driven governance has provoked substantial angst and uncertainty everywhere. There is good reason for this angst, but perhaps not for the usual reasons conventionally advanced. Data-driven governance systems (including the quite ambitious project of Chinese social credit) grounded in accountability and managed through the self-reflexive operations of an analytics that incorporates social, economic, political or religious objectives through algorithm represent a new form of governance, with its own language, its own structures, and its own ecologies. It exists still within traditional systems of law and regulation and was originally understood as a technique for the implementation of the policies and objectives of those systems. Those traditional systems have developed their own language, modalities, ideologies, and structures within which the integrity of the system can be maintained. Yet in this "new era" of governance, data-driven governance already exhibits signs of producing its own language, structures, and modalities for enhancing and protecting system integrity. This system integrity exists within ideological parameters of which the traditional language and forms of constitutional political government operated through, parameters with complex bureaucracies intertwined with judiciaries and popular representative organs that may no longer be particularly relevant.

This "new era" of governance thus may not necessarily call for yet more efforts to "tame" data-driven governance within the cage of traditional government and its structures and methods of operation. Instead, it may require the development of new sensibilities, new interpretive language, and the recognition of new classes of system operators whose injection into the process of governance may profoundly affect the way societies understand and engage with governance organs. This trend may be understood (and

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258.   ED FINN, WHAT ALGORITHMS WANT: IMAGINATION IN THE AGE OF COMPUTING (2017).

encouraged) within those organizations at the vanguard of these changes (within vanguard enterprises in the West (and public security apparatuses) and embedded within certain organs of the collective organization in China). Yet, among those deeply embedded within conventional governance-power systems, it has produced resistance or efforts at domestication, which pepper scholarly journals and the regulatory efforts of state and international organs.[259]

Yet, rather than, or in addition to, resistance and domestication, it may now be time to turn to the business of building principles of *Demokratie, Sozialstaat, Bundesstaat und Rechtsstaat* (e.g., incorporated into the German Basic Law and post second generation constitutions)[260] into and through the language of data and data analytics to ensure that algorithmic governance, like the law-regulatory systems that preceded it, will operate under appropriate ideological constraint. And if the politician, the lawyer, and the bureaucrat will not engage in these projects, then it is likely that the engineer, the econometrician, and manager may.[261] Power relations will not be the same thereafter.

IV.   CONCLUSION

Surveillance—understood as an aggregation of techniques, values, judgments and relationships derived from the operation of complex systems of data harvesting, analytics and reward/punishment behavior management algorithms—has become an essential element of the operation of the modern state,[262] and also of the modern enterprise and other collective institutions.[263] What was once understood as surveillance and monitoring transforms into a sophisticated method of governance when it becomes part of systems of data-driven, algorithmically-structured operations of compliance with substantial incentive, reward, and disciplinary elements. It is no longer just a "means" of government, but has become government itself.

Understood as a system for the delivery of governance objectives, social credit (in China), ratings initiatives, and discretion guidance systems (in the West) have leaped the borders of the private and soft law (culture, mores,

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259.   *See* Raymie E. Mckerrow, *Critical Rhetoric Theory and Praxis, in* CONTEMPORARY RHETORICAL THEORY: A READER 448 (John Louis Lucaites, Celeste Michelle Condit & Sally Caudill eds., 1999).

260.   THE ROUTLEDGE HANDBOOK OF CRITICAL DISCOURSE STUDIES (John Flowerdew & John E. Richardson eds., 2017).

261.   Ragnar Frisch, *The Responsibility of the Econometrician*, 14 ECONOMETRICA 1, 1–4 (1946).

262.   Backer, *supra* note 4.

263.   *See* Stone v. Ritter, 911 A.2d 362 (Del. 2006); *see also* Louis J Bevilacqua, *Monitoring the Duty to Monitor*, N.Y. L. J. CORP. GOV. (Nov. 28, 2011), https://www.cadwalader.com/uploads/books/00775db921691af892a2600dd02c83f5.pdf; s*ee also* Rachel Pells, *London University Admits to Monitoring Student Emails Under Pressure Government Anti-Terror Programme*, INDEP. (Jan. 21, 2017), https://www.independent.co.uk/student/news/kings-college-london-prevent-anti-terror-london-university-islamaphobia-monitoring-student-emails-a7538931.html; Robin Wilson, *How a 20-Page Letter Changed the Way Higher Education Handles Sexual Assault*, CHRON. HIGHER EDUC. (Feb. 8, 2017), https://www.chronicle.com/article/How-a-20-Page-Letter-Changed/239141.

morals) within which it had been confined.[264] Law no longer serves its traditional function either as an organic repository of the regulation of a political community or as the positive expression of the will of the political community as legitimately enacted through its representatives in government. Rather, the technologies through which law was to be enhanced have instead become the means for itself expressing law. "Technical things bear responsibilities, express commitments, and assume roles as agents in the realms of human relationships."[265] But just as governmental power has fractured in the West, so has the availability of surveillance as a means of government. In the West, social credit and rating systems are used everywhere and by all institutions. It is culturally accepted as long as it conforms to cultural expectations about "intrusion." [266]

In the contemporary world, compliance systems and policing are quickly replacing law and the traditional methods of enforcement (either organic or positive law) as the framework through which collectives (the state, the corporation, and religion, to name the most well-known actors) govern. It shifts the function of law from methods of command and obedience to systems of compliance and incentive. Most of the elements of social credit have already been developed in the West. But the *unification of the various elements,* and their seamless operation, would be a great innovation. As a system still very much in development, social credit and ratings systems will encounter a number of technical challenges.

This essay considered technical challenges in the form of system construction and data harvesting issues. The essay examined management challenges that touched on coherence across a vast governmental sphere, the integration with private social credit offshoots, and the challenge of solving the issue of administrative abuse. The essay then considered the challenge of integrating political norms into social systems. These centered on integration with political and systems standards outside of China, and the application of social credit metrics to Chinese enterprises operating abroad. The specific problem surrounding data were also explored. Especially relevant were the challenges of data harvesting, retention, and integrity on the robust operation of social credit and ratings systems. Lastly, the essay considered interpretation challenges. It suggested the complexities of the task of adding meaning to data and algorithms may be difficult. Lastly, the essay reminded the reader of the importance of meta social system construction. To preserve the integrity and sincerity of social system ratings and operation, to avoid systemic corruption, and to ensure appropriate fidelity to core political values and policies, it will be necessary to consider a social credit system of social credit systems. With the appropriate oversight, the development of social credit and ratings will open a new and still largely unexplored area for the development of governance, the rule of law, and the development of the

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264.   Qu Zhehan (曲哲涵), *Renmin Ribao: Yong Xinyong de Liliang Tuidong Shehui Jinbu* (人民日报：用信用的力量推动社会进步) [Social Progress through Social Credit], PEOPLE.COM (June 29, 2018), http://opinion.people.com.cn/n1/2018/0629/c1003-30094633.html.

265.   Langdon Winner, *Technology Studies for Terrorists: A Short Course, in* SURVEILLANCE AND SECURITY 275, 278 (Torin Monahan ed., 2006).

266.   JOHNSON MATTHEW, ARCHAEOLOGICAL THEORY: AN INTRODUCTION (2011).

productive forces of society. Much remains to be done, even as states and enterprises, much less individuals, work quickly to construct a reality which will, inevitably, produce its own ideology, structures, and mechanics. In this new world, the old forms of law, state and order, may well be accorded a place, but one that will necessarily give way to systems grounded in the ideology of measurement, assessment, and reward.