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The People's (Republic) Algorithms

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The People's (Republic) Algorithms

Cover Page Footnote

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THE PEOPLE’S (REPUBLIC) ALGORITHMS

GILAD ABIRI AND XINYU HUANG*

ABSTRACT

Recommendation algorithms, such as those behind social media feeds and search engine results, are the prism through which we acquire information in our digital age. Critics ascribe many social and political woes—such as the prevalence of misinformation and political division—to the fact that we view our world through the personalized and atomized prism of recommendation artificial intelligence. The way the great powers of the internet—the United States, the European Union, and China—choose to regulate recommendation algorithms will undoubtedly have a serious impact on our lives and political well-being.

On December 31, 2021, the Cyberspace Administration of China, a governmental internet watchdog, published a bombshell regulation directed at recommendation algorithms. These regulations, which came into effect in March 2022, exponentially increase the control and autonomy of Chinese netizens over their digital life. At the same time, the regulation will greatly increase the control the Chinese government has over these algorithms. In this timely essay, we analyze the content of the regulation and situate it in its historical and political context.

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INTRODUCTION

Recommendation algorithms, such as those driving the feeds in social media and news sites and those generating search engine results, are the lens through which a growing portion of humanity consumes information.¹ Many of the general critiques of the digital public sphere to the effect that it creates political division and spreads misinformation are aimed at the personalized and atomized nature of viewing the world through the prism of recommendation artificial intelligence (AI).² The way we choose to regulate these algorithms is one of our generation's crucial legal challenges.

Until recently, recommendation algorithms, even more so than other types of AI, were simply not regulated.³ This changed on August 27, 2021, when the Chinese cybersecurity watchdog released an opinion-seeking draft titled *Internet Information Service Algorithmic Recommendation Management Provisions (ISAR)*.⁴ The official version of *ISAR* later came out at the beginning of 2022.⁵ This regulation is first to directly and specifically address the question of recommendation algorithms. This short essay will describe, contextualize, and analyze the *ISAR*. It proposes—good or bad—there is something to be learned from this regulation regarding the general direction of Chinese cyber-regulation and the general policy issues raised by recommendation algorithms. To achieve this goal, this essay places the *ISAR* within the brief history of Chinese cyber-regulation and then critically examines its content through a comparative lens.

1 See generally ELI PARISER, *THE FILTER BUBBLE: HOW THE NEW PERSONALIZED WEB IS CHANGING WHAT WE READ AND HOW WE THINK* (2011) (exploring the ways in which recommendation algorithms gave rise to the personalized web experience, and the democratic issues arising from that); CASS R. SUNSTEIN, # *REPUBLIC: DIVIDED DEMOCRACY IN THE AGE OF SOCIAL MEDIA* (2018) (describing how recommendation algorithms create division in democratic societies). See also Silvia Milano et al., *Recommender Systems and Their Ethical Challenges*, 35 A.I. & SOC'Y 957, 957–967 (2020) (“We interact with recommender [or recommendation] systems [RS] on a regular basis, when we use digital services and apps, from Amazon to Netflix and news aggregators.”).

2 See e.g., SUNSTEIN, *supra* note 1, at 235 (“Algorithms are increasingly able to produce accurate filters, and they’re getting better every day. As with self-selection, so too with algorithms: they make life easier and more convenient. . . . But here as well, horizons can become narrowed, and people can get smaller.”); PARISER, *supra* note 1, at 10 (“They are prediction engines, constantly creating and refining a theory of who you are and what you’ll do and want next. Together, these engines create a unique universe of information for each of us—what I’ve come to call a filter bubble—which fundamentally alters the way we encounter ideas and information.”).

3 Jennifer Cobbe & Jatinder Singh, *Regulating Recommending: Motivations, Considerations, and Principles*, SSRN ELECTRONIC J., 31 (2019) (“This means that recommending falls into a significant and consequential gap in the current legal regime.”).

4 Hulianwang Xinxi Fuwu Suanfa Tuijian Guanli Guiding (Zhengqiu Yijian Gao) (互联网信息服务算法推荐管理规定 (征求意见稿)) [Internet Information Service Algorithmic Recommendation Management Provisions] (promulgated by the Cyberspace Administration of China, Aug. 27, 2021, draft proposal) (English Translation available at <https://digichina.stanford.edu/work/translation-internet-information-service-algorithmic-recommendation-management-provisions-opinion-seeking-draft/>).

5 Hulianwang Xinxi Fuwu Suanfa Tuijian Guanli Guiding (互联网信息服务算法推荐管理规定) [Internet Information Service Algorithmic Recommendation Management Provisions] (promulgated by the Cyberspace Administration of China, Ministry of Industry and Information Technology, Ministry of Public Security, and State Administration for Market Regulation, Jan. 4, 2022, official version) (Chinese version available at http://www.cac.gov.cn/2022-01/04/c_1642894606364259.htm) [Hereinafter *ISAR*].

The *ISAR* is part and parcel of a broader Chinese “tech crackdown” over the last two years.⁶ This crackdown has been widely interpreted as a reassertion of governmental power in the face of the rising tech sector. Specifically, it is part of China’s complete overhaul of its data security regime.⁷ Some of the provisions in the regulation, such as those requiring that algorithms promote mainstream values and positive energy,⁸ are specific to China’s tendency to regulate social morality.⁹ Many others, such as those aimed at protecting privacy, battling internet addiction, and increasing user control, address nearly universal concerns. We show that while many articles reflect or replicate other Chinese or European legislation, the *ISAR* breaks new regulatory ground in its insistence on radical user autonomy and control over recommendation algorithms: it requires that users be able to opt-out of recommendations and have meaningful control over how the algorithms profile them.

To foster understanding of how the *ISAR* seeks to address the challenges of recommendation algorithms, section I serves as a concise primer on the common ways these algorithms operate and the nearly universal challenges ascribed to them. These challenges include issues related to privacy, user autonomy, and adverse social and political effects.

To truly make sense of the *ISAR*, one must locate it within the political and legal context of the People’s Republic of China (PRC). Section II offers a sketch of the three periods of Chinese internet regulation: (1) Before 2000: the Chinese internet was embryonic; regulation focused solely on building up digital infrastructure; (2) Between 2000 and 2017: the digital industry in China rapidly expanded; the main regulatory goal remained to encourage the economic growth of the internet industry, but the government began to also put in place a system to control online content; and (3) After 2017: China entered an era of assertive, systemic regulation of the tech industry. Currently, regulators are not motivated by the need to maintain growth. Instead, they pursue political and social goals by creating detailed cyber regulations in many fields, including data protection, privacy, and AI. The *ISAR* is an emblematic example of the types of regulations that are currently being promulgated in China.

Following the historical context for the *ISAR*, Section III will turn to a detailed analysis of the regulation showing where it parallels other pieces of legislation and where it breaks new ground and reflecting on whether the proposed policies can be enforced and the likelihood of their effectiveness. We

6 See generally Angela Huyue Zhang, *Agility Over Stability: China’s Great Reversal in Regulating the Platform Economy*, 63 HARV. INT’L. L.J. (2022), (analyzing the many prongs of the crackdown on big tech); for a useful, concise, guide see, Chang Che, *China’s ‘Big Tech crackdown’: A guide*, SUPCHINA (2021), <https://supchina.com/2021/08/02/chinas-big-tech-crackdown-a-guide/> (last visited Nov. 19, 2021).

7 See Rogier Creemers, *China’s Emerging Data Protection Framework*, [\(https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3964684#:~:text=Rogier%20Creemers,-Leiden%20University%20%2D%20Leiden&text=They%20provide%20a%20new%20approach,close%20digital%20connections%20to%20China.\(last%20visited%20Nov.%2018,%202021\)](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3964684#:~:text=Rogier%20Creemers,-Leiden%20University%20%2D%20Leiden&text=They%20provide%20a%20new%20approach,close%20digital%20connections%20to%20China.(last%20visited%20Nov.%2018,%202021)) (analyzing the new legal architecture of Data Protection in China and arguing that it is meant to mainly regulate the relationship between consumers and tech companies and mitigate cybercrime).

8 See *infra* Part III.

9 See e.g., Delia Lin, *Morality politics under Xi Jinping*, EAST ASIA FORUM (2019), <https://www.eastasiaforum.org/2019/08/01/morality-politics-under-xi-jinping/> (last visited Nov. 19, 2021) (“In the Xi era, the marriage of law and morality has become an integral part of building the Chinese socialist rule of law system. This amalgamation is achieved through incorporating a prescribed moral code, known as socialist core values, in all legal and judicial processes.”).

conclude by reflecting on the ways in which the *ISAR* may fit within the Chinese Communist Party's (CCP's) political project.

I. A PRIMER ON RECOMMENDATION ALGORITHMS

Recommendation algorithms are the prism through which we experience our digital life. These algorithms affect our choices of the shows and movies we watch,¹⁰ the stories and books we read,¹¹ the news we consume,¹² and the products we buy.¹³ The personalization offered by these algorithms is an imperfect but potentially indispensable solution to the challenge of dealing with the massive deluge of digital information we can easily reach. The goal of recommendation algorithms largely depends on the business model (or governance model) of the entity operating them.¹⁴ Generally, however, their input is information about the user's preference. Their output is a prediction of what items (news, products, social media content) will keep the user engaged (or, less cynically, the user prefers).¹⁵ Therefore, to be effective, recommendation algorithms “collect, curate, and act upon vast amounts of personal data.”¹⁶

These algorithms are usually classified into three major categories based on the type of data they use: (1) Collaborative filtering systems “produce recommendations to . . . users based on inclinations of other users with similar tastes.”¹⁷ (2) Content-based systems use data on the previous behavior of the user to extrapolate what they will like.¹⁸ (3) Hybrid systems—most recommendation systems—use both of the aforementioned approaches to create personalized recommendations for users.¹⁹ In that way, they maximize the utility of their data.

Although it is possible to develop user-centered recommendation algorithms, virtually all those in existence were developed to promote the growth of “online commerce and services.”²⁰ It is therefore essential to locate them within the business models of the companies that use them. As we shall see in

10 See e.g., Carlos A. Gomez-Uribe & Neil Hunt, *The Netflix recommender system: Algorithms, business value, and innovation*, 6 ACM TRANSACTIONS MGMT. INFO. SYS. (TMIS) 1–19 (2015) (analyzing the various algorithms that make up the Netflix recommendations).

11 See e.g., Jieun Shin & Thomas Valente, *Algorithms and Health Misinformation: A case study of vaccine books on amazon*, 25 J. HEALTH COMM. 394–401 (2020) (offering an overview of the Amazon book recommendation system, and a case study of anti vaccination books).

12 See e.g., Natali Helberger, *On the Democratic Role of News Recommenders*, 7 DIG. JOURNALISM 993–1012 (2019) (offering a framework for the evaluation of the democratic function of news recommendation AI).

13 See e.g., Brent Smith & Greg Linden, *Two Decades of Recommender Systems at Amazon.com*, 21 IEEE INTERNET COMPUTING 12–18 (2017) (discussing the Amazon recommendation algorithm).

14 Milano et al., *supra* note 1, at 957 (“it is evident that the applications of RS have been driven by online commerce and services, where the emphasis has tended to be on commercial objectives.”).

15 *Id.* (“Slightly more formally, they are functions that take information about a user’s preferences (e.g. about movies) as an input, and output a prediction about the rating that a user would give of the items under evaluation (e.g., new movies available), and predict how they would rank a set of items individually or as a bundle.”).

16 *Id.*

17 Zeynep Batmaz et al., *A Review on Deep Learning for Recommender Systems: Challenges and Remedies*, 52 A.I. REV. 4, 1–37 (2019).

18 *Id.*

19 *Id.*

20 Milano et al., *supra* note 1, at 957.

our analysis, the *ISAR* is directed broadly at three types of companies: e-commerce, social media, and gig work.²¹ In all three, the commercial objectives of the algorithms are in stark contrast to those of key stakeholders. This gap is greatest in the case of social media algorithms, which are a key part of social media campaigns to grab as much of the user's attention as possible and sell it to advertisers.²² The algorithm's goal is to keep our attention for as long as possible. To this end, social media engages in so-called surveillance capitalism to gather as much data as possible to feed into the algorithms and maximize the company's growth.²³ The social and psychological harms of a digital world curated by algorithms designed to make us addicted have only begun to reveal themselves.²⁴

A. THREE COMMON CHALLENGES RAISED BY RECOMMENDATION ALGORITHMS

The addictiveness of recommendation algorithms, whether intentional or unintentional, pose many challenges for modern society. Three major concerns relevant to the *ISAR* relate to privacy, user autonomy, and adverse social and political effects.²⁵

1. Privacy

Scholars identify four stages of privacy risks in the operation of recommendation algorithms.²⁶ First, personal data is collected without explicit or meaningful consent.²⁷ Second, the very collection of personal data creates the possibility of leaks to external entities.²⁸ Third, even if explicit consent was given, it is impossible for the user (or even the operator) to understand what inferences recommendation systems can draw. Users might well object to some inferences if they were aware of them.²⁹ Fourth, even if the system does not have enough data about a particular user, it is often "able to construct a fairly accurate profile" by using collaborative filtering.³⁰

2. Manipulation and user autonomy

²¹ See *infra* Part III.

²² Tim Wu, *Is the First Amendment Obsolete?*, 117 MICH. L. REV. 547, 548 (2018) ("The most important change in the expressive environment can be boiled down to one idea: it is no longer speech itself that is scarce, but the attention of listeners.").

²³ See e.g., SHOSHANA ZUBOFF, *THE AGE OF SURVEILLANCE CAPITALISM: THE FIGHT FOR A HUMAN FUTURE AT THE NEW FRONTIER OF POWER* (1st ed. 2019) (developing the idea of a surveillance capitalism as a new form of production by which companies collect as much information as possible on consumers in order to manipulate them).

²⁴ For a helpful review, see Betül Keles et al., *A systematic review: the influence of social media on depression, anxiety and psychological distress in adolescents*, 25 INT'L J. ADOLESCENCE & YOUTH 79–93 (2020) (reviewing the current studies on the high correlation between social media use and mental illness).

²⁵ Our treatment of this topic is adapted from Milano et al., *supra* note 1.

²⁶ See generally Arik Friedman et al., *Privacy aspects of recommender systems*, in RECOMMENDER SYSTEMS HANDBOOK 649–688 (2015); Ansgar Koene et al., *Ethics of Personalized Information Filtering*, 9089 in INTERNET SCI. 123–132 (2015); Dimitris Paraschakis, *ALGORITHMIC AND ETHICAL ASPECTS OF RECOMMENDER SYSTEMS IN E-COMMERCE* (2018); Milano et al., *supra* note 1.

²⁷ Milano et al., *supra* note 1, at 961.

²⁸ *Id.*

²⁹ *Id.*

³⁰ *Id.*

The business logic behind recommendation algorithms can lead to attempts to nudge, manipulate, or addict users to certain types of content or products.³¹ User autonomy is also limited by the fact that these algorithms classify users into models that are often self-reproducing. That is, algorithms can limit our options to those of our social grouping, thereby diminishing our ability to choose to leave a group.

3. Negative social effects

Some recommendation algorithms have the potential to transform society. For example, news and social media filters often “run the risk of insulating users from exposure to different viewpoints, creating self-reinforcing biases and ‘filter bubbles’ that are damaging to the normal functioning of public debate, group deliberation, and democratic institutions more generally.”³² These filter bubbles often foment disinformation and misinformation online, such as the myriad campaigns opposing vaccination against COVID-19 during the last two years.³³ A related issue is that recommendation algorithms can be hijacked by groups of active users. This means that news “recommendation systems, streaming platforms, and social networks can become an arena for targeted political propaganda.”³⁴ Besides the political risks created by recommendation algorithms, there are many psychological concerns, especially in relation to minors on social media.³⁵

Recommendation algorithms have created entirely new challenges for the world. Responding to these challenges at the legal level is a process that starts from scratch and goes from crude to perfect. Cyberspace regulation in different countries and regions is closely related to their political structures and legal systems and the development of the internet industry.

It is not a coincidence that China has taken the lead in proposing the *ISAR* to regulate recommendation algorithms. Since 2008, China has had the most internet users in the world and a thriving independent digital platform economy.³⁶ Beyond routine administrative activities, Chinese policymakers also tend toward “campaign-style governance” in regulation,³⁷ under which existing institutions and legislation provide administrative resources for quick

31 See *id.* at 962; Christopher Burr et al., *An Analysis of the Interaction Between Intelligent Software Agents and Human Users*, 28 *MINDS & MACHINES* 735–774 (2018); Katja de Vries, *Identity, profiling algorithms and a world of ambient intelligence*, 12 *ETHICS & INFO. TECH.* 71–85 (2010); Koene et al., *supra* note 26; Mariarosaria Taddeo & Luciano Floridi, *How AI can be a force for good*, 361 *SCI.* 751–752 (2018).

32 Milano et al., *supra* note 1, at 964.

33 On the relationship between social media recommendations are misinformation, see Dominic Spohr, *Fake news and ideological polarization: Filter bubbles and selective exposure on social media*, 34 *BUS. INFO. REV.* 150–160 (2017); for an analysis of the particular case of COVID-19 vaccinations, see Niel F. Johnson et al., *The online competition between pro- and anti-vaccination views*, 582 *NATURE* 230–233 (2020).

34 Milano et al., *supra* note 1, at 964.

35 See Keles et al., *supra* note 24; *Facebook Knows Instagram Is Toxic for Teen Girls, Company Documents Show*, *WALL ST. J.* (Sep. 14, 2021), <https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739>.

36 Michael Keane & Haiqing Yu, *Communication, Culture, and Governance in Asia | A Digital Empire in the Making: China's Outbound Digital Platforms*, 13 *INT'L J. COMM.* 4624, 4628 (2019) (discussing the rise of China's digital platforms as a potential challenge to US-based platforms).

37 See Xueguang Zhou, *THE INSTITUTIONAL LOGIC OF GOVERNANCE IN CHINA: AN ORGANIZATIONAL APPROACH* 1-10 (2017) (explaining the campaign-style governance and routine bureaucracy).

mobilization and harsh enforcement when a perceived crisis looms or a political goal needs to be accomplished. As a result of this governance style, an authoritarian political governance structure, and a volatile style of policy-making, cyberspace regulation in China is a pendulum swing from very lax to very harsh.³⁸ To understand the *ISAR* in detail, we must first review the brief history of internet regulation in China.

II. THE REGULATION OF RECOMMENDATION ALGORITHMS IN HISTORICAL CONTEXT

The history of cyberspace regulation in China can be divided into three periods.³⁹ First, before 2000, China's domestic internet economy was relatively small and economically peripheral and therefore did not receive much regulatory attention. Second, in 2000, the internet industry entered a period of rapid development. This period was characterized by a (wary) coexistence between the relentless growth of internet companies and fragmented regulations. Finally, after 2017, the passage of a series of laws, such as the Cybersecurity Law, Data Security Law, Law on the Protection of Personal Information, and Regulation on the Internet Information Service,⁴⁰ signaled the advent of an era of more centralized, systematic, and assertive cyberspace regulation.

A. BEFORE 2000: EMBRYONIC

Before 2000, the internet industry in China was embryonic. Chinese regulatory strategy focused on encouraging the growth of the internet industry. Governmental action was mainly limited to establishing the infrastructure, rules, and institutions necessary to support the nascent industry. For instance, in April 1997, the first National Informatization Work Conference, held in Shenzhen, defined the main tasks of the national informatization system and adopted the *National Informatization Ninth Five-Year Plan and Vision 2000*.⁴¹ This plan, the first to make the development of the internet industry a central policy goal, recommended the establishment of a nationwide internet infrastructure. The term "informatization" (*xingxihua*) refers to the extent to which a geographical area, an economy, or a society is becoming information based. This term gradually gained prominence in official documents, while the level of

³⁸ See Zhang, *supra* note 6 (offering an explanation for the Chinese policy pendulum).

³⁹ See Eric Harwit & Duncan Clark, *Shaping the Internet in China: Evolution of Political Control over Network Infrastructure and Content*, 41 *ASIAN SURV.* 377-408 (2001), <https://doi.org/10.1525/as.2001.41.3.377>; Anne SY. Cheung, *The Business of Governance: China's Legislation on Content Regulation in Cyberspace*, 338 *N.Y.U. J. Int'l. L. & Pol.* 1-37 (2005) (providing different views on division of Chinese cyberspace regulation history).

⁴⁰ *ISAR*, *supra* note 5 (Article 1: "In order to safeguard national security and the social and public interest, standardize internet information service algorithmic recommendation activities, , protect the lawful rights and interests of citizens, legal persons, and the other organizations, stimulate the healthy development of Internet information services, and carry forward the Socialist core value view; and on the basis of the "Cybersecurity Law of the People's Republic of China", the "Data Security Law of the People's Republic of China", the "Personal Information Protection Law of the People's Republic of China", the "Internet Information Service Management Rules", and other such laws and administrative regulations; these provisions are formulated.").

⁴¹ CYBERSPACE ADMINISTRATION OF CHINA, 1997-1999 INTERNET EVENTS, http://www.cac.gov.cn/2009-04/12/c_126500441.htm (last visited Nov. 14, 2021).

informatization became one of the elements of measuring the level of modernization.⁴²

As a part of the new strategic goal of internet development, new institutions, regulations, and annual official reports were established. In March 1998, the First Session of the Ninth National People's Congress approved the establishment of the Ministry of Information Industry. This newly founded ministry was in charge of the national electronic information products manufacturing industry, communications industry, and software industry.⁴³ The internet was not the main focus of the new ministry, but rather one of many industrial fields it oversaw. At the same time, the China Internet Network Information Center began publishing annual official reports on internet development.⁴⁴ This report describes the state of the Chinese internet industry and the number of internet users.

In summary, we find that before the twenty-first century, the Chinese strategy was to encourage the development of the internet industry and the digital economy. To pursue this goal, the government established institutions, a basic legal framework, and communication channels. Given the small scale of the Chinese internet in this period, regulation of cyberspace largely depended on existing laws and regulations that were not designed with the internet in mind.

B. 2000–2017: THE ERA OF RAPID EXPANSION AND DELEGATED CONTROL

In the first decade of the twenty-first century, China's internet service and digital economy entered an era of rapid development. In addressing this explosive development, the Chinese government had two main goals: maintaining the economic growth fueled by rapid digitalization and at the same time maintaining its own political rule and legitimacy. The challenge, as Chinese leaders saw it, was to harness the benefits of the internet for business development while limiting its potential to disrupt social stability and threaten state security. However, the sweeping spread of the internet across the world and its acceptance by nearly all nations persuaded China to abandon absolute direct control and replace it with various self-censorship schemes.⁴⁵ This marked the rise of a new attempt to control the Chinese internet through the delegation to private internet companies of responsibilities to self-monitor and self-censor.⁴⁶ These policies developed into what Jack Balkin termed new-school speech regulations, which are characterized by states forcing (formally or informally) digital platforms to regulate the speech of users.⁴⁷

The era of internet-targeted legislation in China began in December 2000 when *The Decision of the Standing Committee of the National People's*

42 GENERAL OFFICE OF THE CPC CENTRAL COMMITTEE & GENERAL OFFICE OF THE STATE COUNCIL, 2006-2020 STATE INFORMATIZATION DEVELOPMENT STRATEGY, http://www.cia.org.cn/information/syw_1.htm (last visited Nov. 14, 2021).

43 CYBERSPACE ADMINISTRATION OF CHINA, 1997-1999 INTERNET EVENTS, *supra* note 41.

44 *Id.*

45 Assafa Endeshaw, *Internet Regulation in China: The Never-ending Cat and Mouse Game*, 13 INFO. & COMM. TECH. L. 41-57 (2004) (explaining the change of regulatory pattern adopted by Chinese cyberspace regulators).

46 See Anne SY. Cheung, *supra* note 39, at 4-6 (indicating Chinese regulators increase the self-monitor and self-censor responsibility to platforms).

47 See Jack M. Balkin, *Free Speech Is a Triangle*, 118 COLUM. L. REV. 2011, 2028-29 (2018) (providing explanations to New School Speech Regulations).

Congress on Safeguarding Internet Security was published.⁴⁸ The decision established a list of cybercrimes, including acts against the safe functioning of the internet; national security and the stability of society; the socialist market economy order; societal management order; and personal, property, and other legal rights of individuals, legal persons, and other groups. This was the first cyberspace regulation by the National People's Congress and as such was given the highest enforcement priority. Subsequently, the State Council released the *Regulation on Internet Information Service of the People's Republic of China*.⁴⁹ The passing of these two regulatory acts—the starting point of centralized cyberspace regulation in China—suggests that by this time China's top leadership had begun paying close attention to cyberspace regulation.

A good example of Chinese new-school speech regulation during this period is the increased supervision of internet content providers assumed by the Chinese administration.⁵⁰ The declared goal for these regulations was to provide a “healthy” environment for both political and economic development.⁵¹ Representative regulations include the *Regulations on the Administration of Internet News and Information Services* jointly issued by the Information Office of the State Council and the Ministry of Information Industry in 2005⁵² and the *Regulations on the Administration of Internet Audiovisual Program Services* issued by the State Administration of Radio, Film, and Television in 2007.⁵³ This series of security-oriented content regulations and specialized institutions greatly improved the government's control over internet content management. Film and television programs, social media, and internet platforms are all included in the regulatory scope.⁵⁴ These regulations were the basis for the

48 Quanguo Renmin Daibiao Dahui Changwu Weiyuanhui Guanyu Weihu Hulianwang Anquan De Jueding (全国人民代表大会常务委员会关于维护互联网安全的决定) [Decision of the Standing Committee of the National People's Congress on Preserving Computer Network Security] (promulgated by the Standing Comm. Nat'l People's Cong., Aug. 27, 2009, effective Aug. 27, 2009) (English Translation available at https://pkulaw.com/en_law/977e6970e7ba2ae9bdfb.html) (last visited Nov. 14, 2021).

49 Hulianwang Xinxi Fuwu Guanli Banfa (互联网信息服务管理办法) [Measures for the Administration of Internet Information Services] (promulgated by the St. Council, Sept. 25, 2000, effective Sept. 25, 2000) (unofficial English Translation by the Congressional-Executive Commission on China, <https://www.cecc.gov/resources/legal-provisions/measures-for-the-administration-of-internet-information-services-cecc>) (last visited Nov. 14, 2021).

50 Ian Weber & Lu Jia, *Internet and Self-Regulation in China: The Cultural Logic of Controlled Commodification*, 29 MEDIA, CULTURE & SOC'Y 772–789 (2007) (“China's strategies of overt control, such as censorship, increased monitoring and limiting access to the internet, are widely documented.”).

51 Anne S.Y. Cheung & Zhao Yun, *An Overview of Internet Regulation in China* (University of Hong Kong Faculty of Law Research Paper No. 2013/040, 2013), available at https://papers.ssm.com/sol3/papers.cfm?abstract_id=2358247 (showing the general goals of cyberspace regulation in China).

52 Hulianwang Xinwen Xinxi Fuwu Guanli Guiding (互联网新闻信息服务管理规定) [Provisions for the Administration of Internet News Information Services] (promulgated by St. Council Info. Off. & Ministry of Info. Indus., Sept. 25, 2005, effective Sept. 25, 2005) (English Translation available at https://pkulaw.com/en_law/94b5efc6b64db8a8bdfb.html) (last visited Nov. 14, 2021).

53 Hulianwang Shiting Jiemu Fuwu Guanli Guiding (互联网视听节目服务管理规定) [Administrative Provisions on Internet Audio-Visual Program Service] (promulgated by St. Broadcasting, Film & TV Admin. & Ministry of Info. Indus., Dec. 20, 2007, effective Jan. 31, 2008) (English Translation available at https://pkulaw.com/en_law/65f73f2f183951d9bdfb.html) (last visited Nov. 14, 2021).

54 Rogier Creemers, *Cyber China: Upgrading Propaganda, Public Opinion Work and Social Management for the Twenty-first Century*, 26 J. CONTEMP. CHINA 85 (2017) (providing a scope on internet media regulation in China).

construction of a control and censorship mechanism that included a requirement of self-censorship and mandatory promotion of official state voices.⁵⁵

In general, China's network content regulation in this middle period was administered by three types of mechanisms: preapproval, process monitoring, and post-accountability with campaign-based management (represented by special remedial actions) and agency-based management (represented by corporate self-regulation).⁵⁶ Governmental departments set up access requirements, adopted the real-name system, and conducted reviews of the progress. They also denounced misconduct in cyberspace. In this regulatory pattern, platforms were burdened with comparatively more responsibility. When the responsibility of platforms is increasingly emphasized, regulators often tend to achieve the transmission of regulatory messages through the interview mode, transferring the task of public law regulation from the government to the market-oriented internet platforms.⁵⁷

In contrast with the embryonic stage, the era of rapid expansion saw the beginnings of the development of a more systemized system of cyberspace regulation. To supervise the self-monitoring duties of digital platforms, China established specialized agencies and regulations. In 2014, an institution called the Cyberspace Administration of China (CAC) was established in Beijing.⁵⁸ The CAC was given responsibility for regulating internet information services and cyberspace. Its main focus was promulgating regulations for the pre-authorization of digital platforms, and it is responsible for much of the post-2017 wave of cyber regulations, especially those focusing on data protection.

As the number of legal cases involving the internet grew, specialized internet courts were established "to construct new litigation rules that meet the needs of the Internet era."⁵⁹ The first special internet court was established in Hangzhou (where Alibaba's headquarters are); it was followed by courts in Beijing and Guangzhou. These three intermediate city courts have centralized jurisdiction over disputes about e-commerce platforms, copyright, financial loans, internet contracts, etc., which are brought initially in district courts.⁶⁰ In the same year, the Supreme People's Court released provisions governing the

55 XU WU, CHINESE CYBER NATIONALISM: HOW CHINA'S ONLINE PUBLIC SPHERE AFFECTED ITS SOCIAL AND POLITICAL TRANSITIONS 1–5 (2005) (providing explanation on how censorship on internet benefits nationalism movement and the CCP's official version of patriotism).

56 Li Xiaoyu, *Zhongguo Hulanwang Neirong Jianguan Celve Jiegou Yu Yanhua Yanjiu* [Study of the Structure and Evolution of China's Internet Content Regulation Strategy], 32 INFO. SCI. 24-29 (2014) (indicating common patterns and development of China's internet regulation).

57 Li Yonggang, *Zhongguo Hulanwang Neirong Jianguan de Bianqian Guiji: Jiyu Zhengce Xuexi Lilun de Jiandan Kaocha* [The Development Process of Internet Governance Policies], 2 J. NANJING TECH UNIVERSITY (SOCIAL SCIENCE EDITION) 44-48 (2007) (analyzing how public sectors transferred responsibility to platforms).

58 CYBERSPACE ADMINISTRATION OF CHINA, <http://www.cac.gov.cn/> (last visited Nov. 20, 2021).

59 *Notice of the Supreme People's Court on Issuing the Plan for Establishing the Beijing Internet Court and the Guangzhou Internet Court*, SUPREME PEOPLE'S COURT, <http://en.pkulaw.cn/display.aspx?id=18a935abca63a2d1bdfb&lib=law> (last visited Nov. 14, 2021) (explaining organizational structure of Chinese internet courts).

60 *State Structure of the People's Republic of China*, THE STATE COUNCIL OF THE PEOPLE'S REPUBLIC OF CHINA, http://english.www.gov.cn/archive/china_abc/2014/08/23/content_281474982987300.htm (last visited Nov. 21, 2021) ("China's people's court system is organized into four levels, namely, there are basic, intermediate, high, and supreme people's courts, as well as specialized people's courts for military, railroad, water transportation, intellectual property," finance, and internet).

trial of cases by internet courts.⁶¹ Pretrial procedure, trial procedure, evidence rules, and pronouncements of judgment in internet court are regulated in detail.⁶²

In summary, during this period, the main regulatory goal remained to enable and encourage the rapid economic growth fueled by the internet industry. This is probably the reason Chinese regulators (led by the CAC) chose the path of indirect supervision (allowing companies to self-monitor) rather than direct control. By creating pre-authorization requirements and post-outcome accountability, the regulations sought to give companies incentives to fulfill governmental goals (such as the prevention of “bad social outcomes”) without direct, costly, administrative supervision. This symbiotic coexistence between regulators and corporations was disrupted beginning around 2017, leading to a shift to an era of strong, systematic regulation.

C. AFTER 2017: THE ERA OF STRONG, SYSTEMATIC REGULATION

In recent years, the attention of the Chinese public and leadership has shifted from a pure focus on the economic benefits of the internet to its many dangers and challenges. On September 8, 2020, an article in the magazine *Renwu* titled *Delivery Drivers, Stuck in the System* went viral. The article pointed out that the two Chinese food delivery giants, Meituan and Ele.me, both adopted algorithms for systematically supervising the performance of employees. It described how delivery drivers are plagued by multiple problems, such as unreasonable delivery times, planned routes containing heavy traffic, and heavy fines for late deliveries.⁶³ The drivers joined the internet economy with hopes for a better life, but they were left feeling squeezed and oppressed by their AI masters. They are not the only ones suffering. Digital platforms penetrate the lives of Chinese people to an unprecedented degree. While these platforms provide desirable services, their dominance raises many problems, including lack of protection of privacy, abuse of dominant market position, and infringement of citizens’ basic rights. As these challenges become more socially salient, they naturally receive more attention from regulators. In the same year, the fintech giant Ant Group was asked to cancel its initial public offering at the last minute.⁶⁴ Jack Ma, the founder of the tech giant Alibaba Group and the Ant Group, confronted fierce criticism for making a speech in Shanghai in late October 2020 criticizing

61 Zuigao Renmin Fayuan Guanyu Hulianwang Fayuan Shenli Anjian Ruogan Wenti De Guiding, Fashi [2018] Shiliu Hao (最高人民法院关于互联网法院审理案件若干问题的规定·法释[2018]16号) [*Provisions of the Supreme People’s Court on Several Issues Concerning the Trial of Cases by Internet Courts, Judicial Interpretation No. 16 [2018]*] (promulgated by the Judicial Comm. Sup. People’s Ct., Sep. 6, 2018, effective Sep. 7, 2018) Sup. People’s Ct. Gaz., Sep. 6, 2018, <http://gongbao.court.gov.cn/Details/7e594961f195254a863d6cc90be5cd.html> (China) (English Translation available at <http://en.pkulaw.cn/display.aspx?id=a0b15217b5d9c4a9bdfb&lib=law>) (last visited Nov. 14, 2021) (providing details on judicial practice of Chinese internet courts).

62 *Id.*

63 Lai Youxuan, *Waimai Qishou, Kunz ai Xintong li* (外卖骑手, 困在系统里) [*Takeaway Riders, Stuck in the System*], *Renwu* (人物) [the People], https://epaper.gmw.cn/wzb/html/2020-09/12/nw.D110000wzb_20200912_1-01.htm (last visited Nov. 14, 2021).

64 Katie Canales, *Jack Ma hasn’t been seen in public since Ant Group’s IPO was pulled. Here’s how Chinese regulators slammed the brakes on the firm’s would-be record-breaking \$37 billion IPO*, *BUS. INSIDER* (Jan. 4, 2021), <https://www.businessinsider.com/what-happened-ant-group-ipo-jack-ma-alipay-2020-11>.

Chinese financial regulation.⁶⁵ Other tech giants, including Meituan, Didi, and Tencent, are all under the pressure of antitrust review.⁶⁶ The unfettered growth enjoyed by China's tech giants seems to have come to an end.

In the contemporary era, China's top leadership is less concerned that the growth of its big tech companies may be curbed. In fact, due to the big tech crackdown, the corporations lost trillions of dollars in share value. This extreme policy shift seems to be part of President Xi's campaign for the promotion of "common prosperity," by which he means a greater redistribution of wealth in Chinese society. While the first two eras represented a Chinese focus on sheer economic growth, the current focus is on delivering greater economic equality.⁶⁷ Since regulators are less concerned about the growth of the industry, they can be much more assertive with their policies. The laws and regulations passed in this era are, therefore, much more stringent and systematic.

The new wave of regulations and governmental actions focus on two main fields: antitrust and personal information protection. In July 2021, the State Council released a guide for anti-monopoly enforcement in the platform economy.⁶⁸ This guidance was part of a massive wave of antitrust investigations aimed at many (if not most) of the Chinese big-tech corporations.⁶⁹ Policymakers and academics are increasingly uneasy about the monopoly position of high-tech companies. These companies often originate in a single market but use their technology, data, and infrastructure advantages to gradually develop into cross-market complexes, forming a so-called ecosystem. Recently, Alibaba Group was hit with a landmark \$2.8 billion antitrust fine for abusing its dominant position over rivals and merchants on its e-commerce platforms.⁷⁰ Alibaba had pushed certain merchants selling goods on both its platform and rival platforms to pick only one platform. Similar investigations are aimed at Tencent, Meituan (food delivery), Didi (ride-hailing), Kanzhun (HR

65 Henry Sender, *Jack Ma vs. the Party: Inside the Collapse of the World's Biggest IPO*, NIKKEI ASIA (Nov. 18, 2020), <https://asia.nikkei.com/Spotlight/Most-read-in-2020/Jack-Ma-vs.-the-Party-Inside-the-collapse-of-the-world-s-biggest-IPO>.

66 Joanna Tan, *China Orders Tencent to Give Up Exclusive Music Licensing Rights as Crackdown Continues*, CNBC (Jul. 24, 2021), <https://www.cnbc.com/2021/07/24/china-crackdown-antitrust-regulator-orders-tencent-music-to-give-up-music-label-rights.html>; Masha Borak, *Alibaba, Tencent, ByteDance and 30 Other Big Tech Firms Sign Voluntary Antitrust "Self-discipline" Pledge at Event*, S. CHINA MORNING POST (Jul. 15, 2021), <https://www.scmp.com/tech/policy/article/3141245/alibaba-tencent-bytedance-and-30-other-big-tech-firms-sign-voluntary> (showing Chinese big tech giants confront strong regulation).

67 Sara Hsu, *China's Communist "Common Prosperity" Campaign*, THE DIPLOMAT (Aug. 26, 2021), <https://thediplomat.com/2021/08/chinas-communist-common-prosperity-campaign/> (explaining "Common Prosperity" and political goal of the CCP).

68 Guowuyuan Fanlongduan Weiyuanhui Guanyu Pingtai Jingji Lingyu De Fanlongduan Zhinan (国务院反垄断委员会关于平台经济领域的反垄断指南) [*Guidelines of the Anti-monopoly Commission of the State Council for Anti-monopoly in the Field of Platform Economy*] (promulgated by the Anti-monopoly Commission of the State Council, Feb. 7, 2021, effective Feb. 7, 2021) (English Translation available at <http://en.pkulaw.cn/display.aspx?id=2a4455ec031403a7bdfb&lib=law&SearchKeyword=&SearchCKeyword=%c6%bd%cc%a8%be%ad%bc%c3%c1%ec%d3%f2>) (last visited Nov. 14, 2021).

69 Yuan Yang, *How China is targeting Big Tech*, FIN. TIMES (Jun. 18, 2021), <https://www.ft.com/content/baad4a14-efac-4601-8ce4-406d5fd8f2a7> (providing more details on antitrust investigation on tech giants).

70 Keith Zhai, *Alibaba Hit with Record \$2.8 Billion Antitrust Fine in China; Penalty Comes Amid Regulatory Scrutiny on Business Empire of Alibaba Founder Jack Ma*, WALL ST. J. (Apr. 10, 2021), <https://www.wsj.com/articles/alibaba-hit-with-record-2-8-billion-antitrust-fine-by-chinas-market-regulator-11618018830>.

recruitment), and many more. This antitrust campaign against tech giants suggests that the Chinese administration is determined to curb big-tech monopolies and protect the public interest.

Governmental efforts have also focused on the protection of personal information. The Standing Committee of the National People's Congress voted on August 20, 2021, to adopt the Law on the Protection of Personal Information. This legislation responds to social concerns and provides a strong legal guarantee to address the difficult issues of personal information protection. The law provides both "process protection" and "result protection." The former originates from the civil law rights protection approach, with informed-consent rules at its core, and allows more individual participation in information processing, such as regarding when and where personal information can be collected. The latter model comes from public law protection. The state directly limits the breadth and depth of personal information that can be processed to prevent over-exploitation so that the value of the individual is protected.⁷¹ This law improves the mechanism of individual rights protection in the digital era and constructs a new regulatory framework applicable to cyberspace regulation.

In the current era of China's digital regulations, the government has a zero-tolerance policy in relation to any conduct it perceives as threatening the political security of the regime, and it employs relatively adaptive enforcement strategies vis-à-vis other misconduct. The space for free public discussion in the digital sphere has narrowed in recent years.⁷²

III. THE ISAR

The historical context we have just reviewed enables us to better understand the subject, approach, and style of cyberspace regulation in China. The *ISAR* was released in the era of strong regulation, in which exist specified institutions, a systematized legal framework, and clear enforcement policies. Platforms are supposed to conduct self-censorship and respond to increasingly detailed governmental regulations.

In this section, we will analyze the content of the *ISAR* and contextualize it within Chinese intellectual and political debates. Many of the problems that the *ISAR* tries to resolve—consumer and labor protections, lack of transparency, and more—have already been addressed in the recent wave of legislation, such as the Personal Information Protection Law and the Data Security Law. However, as we discuss below, several of the provisions found in the *ISAR* are specifically tailored to address the challenges raised by recommendation algorithms and go beyond what is found in former legislation.

71 Cai Peiru, *Geren Xinxi Baohu Yuanli Zhi Bian: Guocheng Baohu He Jieguo Baohu* [Discrimination of Personal Information Protection Principles: Process Protection and Result Protection], 5 ADMIN. L. REV. 91-101 (2021) (analyzing two models of private information protection in China).

72 The changes in the field of antitrust practice and personal information protection echo Jack Balkin's work. Balkin proposed three models in social media regulation, including the fields of antitrust and competition law, privacy, and consumer protection law, and balancing intermediary liability with intermediary immunity. He argues that to shape the organization and incentives of the industry to better achieve public ends are general goals for regulators. Jack M. Balkin, *How to Regulate (and not Regulate) Social Media*, 1 J. FREE SPEECH L. 71 (2021).

A. THE PUBLIC DEBATE ON RECOMMENDATION ALGORITHMS

On April 19, 2016, President Xi Jinping hosted a symposium on network security and informatization and delivered a speech in which he declared his intention to strengthen Chinese cyber power and further develop the internet industry. He said that his goal is “to promote the development of China’s cybersecurity and informatization industry, so that the internet can better benefit the people.”⁷³ It is clear that for Xi, the development of the internet industry is an integral part of the promotion of people’s happiness. For the internet to promote people’s happiness, President Xi continued, what is needed is a strengthening of cyberspace regulations.⁷⁴

Official Chinese voices have been constantly urging stronger and more comprehensive regulation over algorithmic recommendations.⁷⁵ Articles in the official media attest to the government’s determination to regulate the platform economy generally and algorithmic recommendations specifically. As early as 2018, the official platform, People.cn, published an article entitled *How to Regulate Algorithms in the Era of Internet?*⁷⁶ This article suggested that algorithmic recommendations meet people’s diversified and personalized information needs while at the same time forming an “information cocoon” filled with bad and vulgar content through value-oriented algorithmic recommendations.⁷⁷ This is very reminiscent of, and likely influenced by, the U.S. discussion about echo chambers and filter bubbles.⁷⁸ At the end of the article, the author advocated strengthening regulation of algorithmic recommendations. The ISAR responded to that call. In fact, People.cn published a comment on the ISAR opining that the platforms should maintain user-oriented (rather than stockholder-oriented) policies.⁷⁹

Official media statements echo public opinion to a certain extent. Regulation of recommendation algorithms gains much support from public opinion. On Weibo, there is a great deal of criticism of exaggerated advertisements, eye-catching headlines, extremely emotional articles, and the like that are provided through algorithmic recommendation. One Weibo user complains, “The algorithm thing is garbage. A total of 12 recommendations, eight are what I hate, two are not appealing, only two are my favorite.”⁸⁰ Some

73 Song Zijie & Li Jiaqi, *Xi Jinping “4-19” Jianghua Wu Zhounian: Hulanwang Zaofu Renmin Chuxin Bujian* (习近平“4·19”讲话五周年：互联网造福人民初心不变) [*The Fifth Anniversary of Xi Jinping’s “4-19” Speech: the Internet for the Benefit of the People’s Original Intention Remains Unchanged*], Renmin Wang (人民网) [People.cn] (Apr. 19, 2021), <http://cpc.people.com.cn/n1/2021/0419/c164113-32081898.html>.

74 *Id.*

75 Dai Xin, *Chinese politics of the internet: Control and anti-control*, 13 CAMBRIDGE REV. INT’L AFFS. 181 (2000); William T. Dowell, *The Internet, Censorship, and China*, 7 GA. J. INT’L AFFS. 111 (2006) (advocating stronger cyberspace regulation).

76 Wangluo Shidai Yinggai Ruhe Guifan Suanfa (网络时代·应该如何规范“算法”) [*How to Regulate Algorithm in the Era of Internet*], Renmin Wang (人民网) [People.cn] (Jul. 4, 2018), <https://m.gmw.cn/baijia/2018-07/04/29667875.html>.

77 *Id.*

78 See SUNSTEIN, *supra* note 1 at 235; PARISER, *supra* note 1 at 10.

79 Bao Yuankai, *Hulanwang Pingtai Qiemu Hushi Yonghu Daoxiang* (互联网平台切莫忽视用户导向) [*Internet Platforms Should not Ignore User Orientation*], RENMIN WANG (人民网) [PEOPLE.CN] (Sep. 2, 2021), <http://finance.people.com.cn/n1/2021/0902/c1004-32215242.html>.

80 From Weibo User “Minjian Xianshan Shuimian Dashi”, Available at https://weibo.com/u/1023615324?refer_flag=1001030103_&is_all=1 (Last visited Nov. 21, 2021).

netizens summarized the three characteristics of the poor quality of recommendation AI: difficulty in distinguishing true from false, misleading results, and superficial profiles.⁸¹

The negative side of algorithms is also widely discussed in academia. Zhang Linghan holds that the abuse of algorithmic power in commercial sectors leads to unfair trade.⁸² The use of algorithms in the public sector sometimes challenges due process and the principle of exclusive power. Also discussed is the potential negative influence of algorithmic recommendation, especially in the fields of mainstream ideology, unfair competition, and individual rights protection.⁸³ Scholars also suggest that the platform's emphasis on data flow reduces the leading power of mainstream ideology. While user-preference recommendations intensify concept isolation and value differentiation, filtering recommendations cause value loss and information manipulation.⁸⁴ Similarly, scholars are also concerned that the abuse of algorithms might lead to platform monopoly, producing risks such as excessive market concentration, competition solidification blockade, and data security downgrade.⁸⁵

As for regulating recommendation AI, Ding Xiaodong suggested employing different regulatory methods for different scenarios.⁸⁶ He argued that specific regulatory systems, such as algorithm disclosure, data empowerment, and anti-algorithmic discrimination, should be constructed under the principle of scenario-based algorithm regulation. Wang Qinghua argued that transparency should be the guiding principle in algorithmic regulation. He believes that explaining algorithm transparency can relieve the public's anxiety about the loss of control over algorithmic decision-making. Other scholars are concerned that the algorithmic transparency principle is not feasible given the inherent limitations of ex-post regulation.⁸⁷ Shen Weiwei argued that the algorithms transparency principle might undermine national security, individual rights, and social stability in certain scenarios.⁸⁸

81 Shanma Zhineng, *Youdao Cheng? Liuliang Zhishang? Suanfa Tuijian, Gaobie Yeman Shengzhang* [Induced addiction? Traffic first? Algorithm recommendation bid farewell to savage growth], WANGYI(Sep. 3, 2021), <https://www.163.com/dy/article/GJ0BERBE0538SR0Y.html>.

82 Zhang Linghan, *Suanfa Quanli de Xingqi, Yihua ji Falv Guizhi* [Algorithm Power: Rise, Alienation and Regulation], 4 *STUD. L. & BUS.* 63-64 (2019) (“Due to the lack of effective regulation, algorithmic power in the commercial sphere The lack of effective regulation of algorithmic power in the commercial sector has created an unfair trade with consumers and given rise to surveillance capitalism.”) (translation provided by the author).

83 Ding Xiaodong, *Lun Suanfa de Falv Guize* [On the Legal Regulation of Algorithms], 12 *CHINA SOC. SCI.* 138-159 (2020) (“The rise of algorithms poses challenges to their legal regulation as they may challenge people's right to have individual freedom and equal protection.”).

84 Hou Dongde & Zhang Liping, *Suanfa Tuijian Yishixingtai Fengxian de Falv Guifan* [The Ideological Risk of Algorithm Recommendation and Its Legal Prevention], 321 *CHONGQING SOC. SCI.* 77-89 (2021) (analyzing the unneutral nature of recommendation algorithms and its ideological attributes).

85 Chen Bing & Lin Siyu, “*Shuju + Suanfa*” *Shuanglun Qudong xia Hulianwang Pingtai Shengtaixing Longduan de Guizhi* [On Regulating the Internet Platform Ecological Monopoly Driven Jointly by Data and Algorithm], 8 *INTELL. PROP.* 43-63 (2021) (analyzing the negative side of platform monopoly brought by algorithm).

86 Xiaodong, *supra* note 83, at 159 (“Algorithms should be regulated in a scenario-based manner, and different algorithms should be regulated according to different types of scenarios.”).

87 Wang Qinghua, *Suanfa Touming de Duochong Weidu he Suanfa Wenze* [The Multiple Dimensions of Algorithmic Transparency and Algorithmic Accountability], 6 *J. COMPAR. L.* 163-173 (2020) (“Algorithmic transparency as an information regulation mechanism is an inevitable choice in the trend of digital socialization and digitization of society, and it helps to dispel public concerns about the loss of decision-making autonomy in decision-making.”).

88 Shen Weiwei, *Suanfa Touming Yuanzhe de Mingsi: Suanfa Guizhi Lilun de Pipan* [The Myth of the

We will now turn to a detailed analysis of the *ISAR* and see how these concerns affected its drafting.

B. THE *ISAR*

The *ISAR* applies to “algorithmic recommendation services”⁸⁹ that operate within mainland China. It provides a framework for the regulation of a wide variety of recommendation algorithms. If implemented, these regulations will have far-reaching consequences for the Chinese tech industry (as well as for the select group of foreign platforms allowed to operate in mainland China). The provisions apply to the “personalized recommendation algorithms”⁹⁰ that power social media feed AI—for example, Youku Tudou (the equivalent of YouTube), Douyin (aka TikTok), Weibo, Twitter, and LinkedIn—content providers (streaming of music and video), news aggregators, and e-commerce sites. Furthermore, the *ISAR* regulates “dispatching and decision-making”⁹¹ AI, such as that used to operate gig-work platforms (delivery and transport services), and “generative or synthetic-type” algorithms that are used to generate content in gaming and virtual environments.

One of the goals of the *ISAR* is to ensure that the user’s online experience, which is almost always mediated by recommendation AI, does not produce negative moral and social effects. Some of these negative effects are quite common sense; for example, Article 18 prohibits the manipulation of minors in a way that can “encourage internet addiction,”⁹² “imitate unsafe conduct,”⁹³ or produce other bad habits. Similarly, there is a requirement that algorithmic recommendation providers periodically review their algorithms and prevent them from “leading users to addiction”⁹⁴ or over-consumption.⁹⁵ At the same time, some goals are unique to the PRC’s tendency to regulate social morality.⁹⁶ For example, Article 6 requires that recommendation algorithms adhere to “mainstream value orientations”⁹⁷ and “actively promote positive energy,”⁹⁸ in particular when it deals with content presented on “home pages, hot topics, top recommendations and lists, and pop-up windows.”⁹⁹ None of these requirements are especially new or surprising. China has several laws on the books that require that platforms remove or prevent content that is illegal or contrary to the Party line. However, these provisions in the *ISAR* expand the responsibilities assigned to algorithm operators from preventative measures to the active promotion of positive content. This promotion seems to mainly consist of content that is:

Algorithm Transparency Principle: A Critique of the Algorithm Regulation], 41 GLOB. L. REV. 20-38 (2019) (“In contrast to essentialism-driven *ex ante* regulation such as algorithmic transparency, the pragmatism-driven *ex post* regulation such as accountability should be a more appropriate regulatory strategy.”)

⁸⁹ *ISAR*, *supra* note 5.

⁹⁰ *Id.*

⁹¹ *Id.*

⁹² *Id.*

⁹³ *Id.*

⁹⁴ *Id.*

⁹⁵ *Id.* (“May not set up algorithmic models that go against public order and good customs, such as by leading users to addiction or high-value consumption.”).

⁹⁶ See e.g., Lin, *supra* note 9.

⁹⁷ *ISAR*, *supra* note 5.

⁹⁸ *Id.*

⁹⁹ *Id.*

Patriotic, family-friendly, and focuses on positive stories in line with the 'core socialist values' of the CCP, while refraining from content that promotes undesirable behavior—extravagance and over-consumption, violent or anti-social behavior, sexual promiscuity, excessive adoration of celebrity idols and other public figures, and political activism, to name a few.¹⁰⁰

Following this logic, algorithms that have the potential to influence public opinion will be more strictly scrutinized and need to be registered with the authorities.¹⁰¹

Aside from these paternalist moral requirements, the new regulations list a wide array of technical and policy requirements. Many of them parallel provisions in the Personal Information Protection Law, the EU's General Data Protection Regulation, and the EU AI regulations. Specifically, they require AI operators to establish systems that will enable different types of reviews of the algorithm and its various security mechanisms. The *ISAR* does this by requiring operators to establish "management systems" and "technical measures" that will enable the auditing of algorithms, assessments of security, and "personal information protection" (Article 7).¹⁰² Operators are required to regularly review, evaluate, and verify their AI (Article 8).¹⁰³ They are also required to establish a "characteristics database" that will enable them to identify "illegal and undesirable" information. The spread of illegal information must be stopped immediately, and the incident must be recorded and reported to the CAC and related departments (Article 9).¹⁰⁴ This stipulation makes the operators liable for content recommended to users by their algorithms.¹⁰⁵ This builds on China's Cybersecurity Law, which holds platforms liable for hosting illegal or undesirable content.¹⁰⁶ Compliance with the regulation also requires the filing of an AI self-assessment report (Article 24).¹⁰⁷ None of these requirements seem to go much beyond what already existed in China's suite of digital regulations, and parallels for most of them can be found in EU regulations.

100 Arendse Huld, *China Passes Sweeping Recommendation Algorithm Regulations*, CHINA BRIEFING NEWS, <https://www.china-briefing.com/news/recommendation-algorithm-regulations-china-cybersecurity-regime/> (last updated Jan. 6, 2022).

101 *ISAR*, *supra* note 5.

102 *Id.*

103 *Id.* (Article 8: "Algorithmic recommendation service providers shall regularly examine, verify, assess, and check algorithmic mechanisms, models, data, and application outcomes, etc., and may not set up algorithmic models that go against public order and good customs, such as by leading users to addiction or high-value consumption.").

104 *Id.*

105 *Id.* (Article 31: "Where an act violating public order management is constituted, public order management punishment is to be imposed according to the law; where a crime is constituted, criminal liability is to be prosecuted according to the law.") (Translation by author).

106 Cybersecurity Law of the People's Republic of China, (promulgated by the Standing Comm. Nat'l People's Cong., Nov. 7, 2016, effective June 1, 2017), Order No. 53 (China) (Article 47: "Network operators shall strengthen management of information published by users, and where they discover information of which the publication or dissemination is prohibited by laws and regulations, they shall immediately stop dissemination of that information, take measures such as deleting it, prevent the information from spreading, save relevant records, and report to the relevant departments in charge.") (English translation available at <http://lawinfochina.com/display.aspx?id=22826&lib=law>).

107 *ISAR*, *supra* note 5.

The ISAR seeks to address several current controversies, including the protection of gig workers and issues of differential pricing schemes in e-commerce. Article 20 requires that whenever recommendation AI assigns work to employees, as occurs with ride-hailing and food-delivery apps, it “fulfills the obligations of protecting workers’ rights to get reasonable paid, to rest, and to leave.”¹⁰⁸ Article 21 seeks to prevent “unreasonably differentiated treatment” in pricing and trading conditions online. This especially targets price tailoring according to the user’s previous purchases, the type of phone they are on, or their geographic location.¹⁰⁹

Where the *ISAR* breaks new regulatory ground¹¹⁰ is in its insistence on user autonomy and control over recommendation algorithms. Users must be informed in a “clear manner” about the “basic principles, purposes, and motives” of the recommendation services they are receiving (Article 15).¹¹¹ Other provisions in the regulation require that users be able to opt-out of recommendation algorithms altogether (without losing access to the service) and be given the option to “choose, revise, or delete user tags” used in their recommendation profile, and finally users are to have the option to demand an explanation from an operator when they feel AI had “major influence on their rights and interests” (Article 17).¹¹² The right to opt-out seems to be a plausible solution for some information recommendation services, such as search engines and e-commerce sites, where a return to a non-personalized service does not undermine the very nature of the service. The same is not true of feed-based social media, where the personal curation of information is inherent in the experience. What is Tiktok without its personalization algorithm? Not much. This is probably why Article 17 also requires that users be allowed to edit the profiles that inform AI recommendations. Achieving this will require algorithm operators to design an interface where users can view their profile and remove or edit the way AI recommends information to them. This is not as simple as it sounds. Tiktok, for example, already allows user to download all the information the platforms has on them.¹¹³ Such a download is in the form of an Excel spreadsheet with thousands of video names, the number of seconds spent on each video, browsing speed, etc. No regular user can make any sense of such a list, let alone edit it in a meaningful way. What Article 17 requires, therefore, is for platforms to develop an interface that can translate the AI profile into a form understandable to users and then adjust the AI profile in a way that fits the choices made by the user. This is not a simple task. As we discussed above, recommendation AI performs “a multi-objective optimization based on a very large number of input data points.”¹¹⁴ This process is constantly improved by a “continuous feedback

¹⁰⁸ *Id.*

¹⁰⁹ *Id.*

¹¹⁰ The only other piece of legislation or regulation that directly addresses recommender systems is Article 29 of the EU Digital Services Act, which stops well short of requiring digital platforms to let users edit their recommendation profiles, and merely requires that they have an option to use the services without personalization. *See* European Commission 2020/0361/COD, art. 52, 2020 O.J. (L. 825).

¹¹¹ *ISAR*, *supra* note 5.

¹¹² *Id.*

¹¹³ *Requesting Your Data*, TIKTOK, <https://support.tiktok.com/en/account-and-privacy/personalized-ads-and-data/requesting-your-data> (last visited Nov. 22, 2021).

¹¹⁴ Nikola Milojkovic et al., *Multi-Gradient Descent for Multi-Objective Recommender Systems*, ARXIV:2001.00846 [CS, STAT] (2020), <http://arxiv.org/abs/2001.00846> (last visited Nov. 22, 2021).

loop” through which the AI adapts to how well its recommendations worked.¹¹⁵ Recommendation algorithms are, therefore, in constant metamorphosis, which makes them hard to pin down. This is not to say that achieving meaningful user control over AI profiles is impossible, but rather that it requires serious investment by algorithm operators. The same difficulty applies to the need to explain the recommendations to users.

The content of the *ISAR* makes clear that Chinese regulators are committed to addressing the common challenges of privacy, user autonomy, and adverse political and social effects. The regulators are willing to go far in addressing these issues and are not concerned about curbing business growth through overregulation. As we have seen, many of the measures directly parallel those under discussion in the EU and other democratic legal regimes, while others make sense only in the context of the PRC.

CONCLUSION: RECOMMENDATION ALGORITHMS IN THE PRC

The technological and business logic behind the operation of recommendation AI is largely the same across the world, so many of the challenges facing regulators are generally similar. It is therefore worthwhile for academics and policy leaders to carefully study the design and future implementation of the *ISAR* to learn which measures seem to work and which do not.

At the same time, as this essay made clear, the *ISAR* should be understood as a crucial piece of a much wider political campaign that is endemic to China. Since the *ISAR* was recently enacted, it is too early to make any definitive statements about its exact place in the current political project of the CCP.

To understand the *ISAR* and Chinese law and politics better, scholars will need to examine the relationship between recommendation algorithms and the political legitimacy of the CCP regime. One legitimation strategy that the CCP seems to be pursuing in its recent “common prosperity” campaign is showing Chinese citizens that the ruling party is constantly working to improve their lives.¹¹⁶ That is probably at least part of the reason the *ISAR* addresses so many of the issues that the Chinese citizen-body cares about: privacy challenges, the plight of gig workers, differential pricing schemes, and more.¹¹⁷ This strategy relies on “accomplishing concrete goals such as economic growth, social stability, and national unity, to retain its legitimacy.”¹¹⁸ It is possible that investing in the regulation of recommendation algorithms will yield high dividends in terms of legitimacy. Since we experience the digital world through AI algorithms, and since these algorithms are unpopular, regulating them in the direction of greater user control and autonomy is a good way to show the people

115 Sapni G. K. & Mihir Mahajan, *Understanding China's Draft Algorithm Regulations*, DIPLOMAT (Sept. 16, 2021), <https://thediplomat.com/2021/09/understanding-chinas-draft-algorithm-regulations>.

116 See Yuchao Zhu, “Performance Legitimacy” and China’s Political Adaptation Strategy, 16 J. CHINESE POL. SCI. 123, 123–140 (2011) (analyzing the reasons the CCP chose the path of performance legitimacy).

117 See Zhang, *supra* note 6, at 6 (“Indeed, the Chinese government is cultivating mass support by exerting pressures on Chinese tech firms to lower prices for small merchants, drivers and courier workers, and to improve welfare for their employees and contractors.”).

118 Zhu, *supra* note 116, at 124.

that their lives are meaningfully improved by the government.¹¹⁹ The centrality of recommendation AI in Chinese information consumption cannot be overstated. Regulating it in a way that increases user privacy and autonomy, which is a central part of the ISAR, may be seen as a good way of reminding the citizens of the positive impact on their lives of governmental power. In a way, recommendation AI and the centrality of digital devices in our lives open up a new venue for the pursuit of performance legitimacy. If the recommendation algorithm regulations are effectively enforced, citizens will see a dramatic change in the way they are able to navigate their digital life.

119 See Zhang, *supra* note 6, at 146 (“A lingering question for the great reversal in regulating Chinesetech giants is whether it will ultimately benefit the hundreds of millions of Chinese consumers, small merchants, delivery workers and ride-hailing drivers who are connected by these behemoth online platforms, as well as the employees and contractors of those platforms.”).