

Towards Online Dispute Resolution-Led Justice in China

Carrie Shu Shang & Wenli Guo*

Abstract

The use of online dispute resolution (ODR) in courts is a growing topic of interest. By focusing on the recent development of ODR-connected smart courts in China, this article explores ODR's potential impact on Chinese legal systems from three aspects: role of courts and the legal profession, due process rights, and information safety. By focusing on changing dispute resolution theories – from emphasizing on conflict resolution to dispute prevention – the article argues that ODR-led court reforms rose to the centre because the reform caters to specific purposes of the recent series of reforms conducted under the auspices of the Rule of Law campaign, by prioritizing efficiency goals and attempting to enhance individualist justice experiences. In this article, we define the meaning of ODR in China and describe and categorize ODR technologies that are currently in use in China. Based on these general findings and promising technological options of ODR, we also recommend ways to better implement ODR in Chinese courts to take full advantage of technological advancements.

Keywords: Online Dispute Resolution, smart court, internet court, access to justice, China.

1 Introduction

The use of online dispute resolution (ODR) in courts is a growing topic of academic interest.¹ In recent years, some of the most aggressive and most notable developments of ODR-connected public justice systems took place in the People's Republic of China (PRC).² Online conflict resolution systems were first seen

* Carrie Shu Shang, Assistant Professor, Coordinator, Business Law program, California State Polytechnic University, Pomona, Wenli Guo, Ph.D., Assistant President, Beiming Software Co. Ltd., President, Internet Nomocracy Institute of Beiming Software Co. Ltd.,

1 See e.g., Anjanette H. Raymond & Scott J. Shackelford, 'Technology, Ethics and Access to Justice: Should an Algorithm be Deciding Your Case', *Michigan Journal of International Law*, Vol. 35, No. 3, 2014, p. 485; Dorcas Q. Anderson, 'Ethical Concerns in Court-Connected Online Dispute Resolution', *International Journal of Online Dispute Resolution*, No. 1-2, 2018, p. 1; Orna Rabinovich-Einy & Ethan Katsh, 'The New New Courts', *American University Law Review*, Vol. 67, No. 1, 2017, p. 165; David A. Larson, 'Designing and Implementing a State Court ODR System: From Disappointment to Celebration', *Journal of Dispute Resolution*, Vol. 2019, No. 2, 2019, p. 77.

2 See Amy Schmitz, 'Expanding Access to Remedies through E-Court Initiatives', *Buffalo Law Review*, Vol. 67, No. 1, 2019, p. 125.

adapted by e-commerce platforms in China to resolve small-volume disputes between online sellers and shoppers.³ Before long, the Chinese government started to invest huge resources in its courts to explore how ODR technologies could be applied in judicial dispute resolution, forming the basis of the ‘Smart Courts Construction’ campaign.⁴ By the end of 2019, China had established three Internet Courts – in Hangzhou, Beijing and Guangzhou – together handling around 1.2 million disputes by the end of 2019.⁵ As a pioneering state in utilizing ODR technologies in its public justice system, scholars, practitioners and business parties are all wondering whether and how these rapidly emerging ODR forums, private and public alike, might transform traditional concepts of justice in China.

This article provides one of the first comprehensive scholarly looks at ODR technologies adopted by different levels of courts in China. In this article, in Section 1 we provide the background on recent judicial reforms in China, and explain why the development of Smart Courts is a natural next step of a series of Rule of Law reforms conducted since the 18th National Congress of the Communist Party of China in 2012. Then in Section 2 we attempt to search for the meaning of ODR in China, by examining three dispute resolution mechanisms that embrace the use of ODR technologies: self-contained ODR platforms, private online Alternative Dispute Resolution (ADR) service platforms and online courts. In Section 3 we survey major ODR technologies implemented by Chinese courts, describing and categorizing a huge spectrum of ODR technological applications currently in use. In Section 4, the article assumes a system-design approach, discussing the impact of ODR on legal systems and concepts of justice by focusing on three areas: role of courts, due process rights and information safety. Nonetheless, this article also raises pivotal cautions and questions for ensuring fairness and transparency in the evolution of justice systems in China over the longer term.

1.1 ODR as Justice from Above

The problem of access to justice is not new. Overcrowded, slow-paced and low-budget courts are seen in many parts of the world and are objects of sharp criticisms.⁶ Nonetheless, compared with Western nations where ODR emerged more as a form of ‘Justice from Below’,⁷ in China the rapid infusion of ODR into court systems is more strongly imposed by the state mandate.⁸ As ‘Justice from

3 Lizhi Liu & Barry R. Weingast, ‘Taobao, Federalism, and the Emergence of Law, Chinese Style’, *Minnesota Law Review*, Vol. 101, 2018, pp. 1581-83.

4 See generally, Chinese Courts and Internet Judiciary White Paper (hereinafter “White Paper”), ed. Supreme People’s Court of People’s Republic of China (2019).

5 Five Aspects of Progress in Chinese Internet Courts, www.court.gov.cn/zixun-xiangqing-205741.html.

6 Orna Rabinovich-Einy & Ethan Katsh, ‘Access to Justice: Fair and Efficient Process for The Modern Age’, *Cardozo Journal of Conflict Resolution*, Vol. 18, 2017, p. 637.

7 Jonathan M. Hyman & Lela P. Love, ‘If Portia Were a Mediator: An Inquiry into Justice in Mediation’, *Clinical Law Review*, Vol. 9, 2002-03, p. 157.

8 “Internet Justice” and “Smart Justice” campaigns are interchangeable used by Chinese official documents, while some Chinese scholars believe that Smart Justice is an early progeny of Internet Justice.

Above', coordinated efforts dedicated to promote wide scale of adoption of ODR technologies in the public justice system in China are both a direct response to changing access to justice concerns and a policy initiative motivated to enhance citizens' experiences with a more functional judicial system.

1.1.1 Deepening Rule of Law Reforms

The Rule of Law campaign (*yifa zhiguo*) in China is often used by Western scholars to describe numerous policy initiatives utilized by CCP leaders since the 1990s to institute a rule-based or law-based governance system in China.⁹ The term was further used to promulgate and validate the governance agenda through the Hu Jintao era, while in recent years scholars such as Carl Minzner have pessimistically started to warn a trend of 'turn against law' in China.¹⁰

The ascent of Xi Jinping to the position of general secretary of the Chinese Communist Party in late 2012 marked an important turning point in China's judicial and social reforms. Soon after Xi officially became the chief leader of the People's Republic of China and in the 18th National Congress of the Communist Party of China, his administration promulgated the "Decision of the Central Committee of the Communist Party of China on Some Major Issues Concerning Comprehensively Deepening the Reform".¹¹ Following that and in October 2014, the historic decision of the CCP Central Committee was adopted at the Fourth Plenum Session of the 18th Party Congress. Called the "Decision of the Central Committee of the Communist Party of China on Major Issues Pertaining to Comprehensively Promoting the Rule of Law" (the '2014 Decision'),¹² it was the first in the history of the People's Republic of China to focus exclusively on Rule of Law reforms.

Although Xi's Rule of Law reforms consist of actions in all aspects of law making, dispute resolution as the symbol of legality and general architecture leading to better access to justice is at the centre of these reforms.¹³ In recent years, people's dissatisfaction with the Chinese judiciary lie in complaints of case filing barriers, costly processes and enforcement difficulties.¹⁴ Development of ADR and the re-centring on interests-based dispute resolution tools were seen as one cure to these problems. Mediation, which has long been considered as the

9 See, e.g., Susan Trevaskes, 'A Law Unto Itself: Chinese Communist Party Leadership and Yifa Zhiguo in the Xi Era', *Modern China*, Vol. 44, No. 4, 2018, p. 347.

10 Carl Minzner, *Turn Against Law, End of an Era: How China's Authoritarian Revival is Undermining Its Rise*, 1st edn., Oxford University Press, Oxford, 2018.

11 See Decision of the Central Committee of the Communist Party of China on Some Major Issues Concerning Comprehensively Deepening the Reform, <http://cpc.people.com.cn/n/2014/1029/c64387-25927606.html>.

12 See Decision of the Central Committee of the Communist Party of China on Some Major Issues Pertaining to Comprehensively Promoting the Rule of Law, www.gov.cn/zhengce/2014-10/28/content_2771946.htm.

13 See Frank E.A. Sander, *Varieties of Dispute Processing*, West Publishing Company: Minnesota 1976 (describing alternatives to adjudication for resolving disputes); see also Andrew B. Mamo, 'Three Ways of Looking at Dispute Resolution', *Wake Forest Law Review*, Vol. 54, 2000, p. 1399.

14 See Yu Fan, 'The Reconstruction of Mediation: Centering on the Reform of Judicial Mediation', *Law and Social Development*, No. 2, 2004 (originally in Chinese).

way of maintaining social stability, hierarchy and social harmony, was largely promoted by the Chinese state.¹⁵ Chinese academics have well documented how mediation helped to reduce caseloads of overworked judges and improved enforcement results, thereby helping disputants to better realize their rights and achieve longer term interests.¹⁶ In 2015, the Central Committee promulgated the ‘Opinion Concerning Improvement of Alternative Dispute Resolution’, ordering all levels of courts in China to engage in research to expand ways that ADR could be used to facilitate court processes.¹⁷ Innovative ADR designs, such as ‘Courtroom on Horseback’¹⁸ and ‘Fengqiao experience’,¹⁹ which allow litigants to resolve conflicts without going through the entire trial process, have been particularly encouraged.²⁰

Moreover, rapid advancement of technology has offered some new angles to how reform measures can better enhance people’s justice experiences. One impactful reform was the judicial transparency (*si fa gong kai*) project, which began in 2009 and was closely associated with the improvement of civilians’ perception of the quality of justice and trust in the government. At the core of the project is the continuous online publication of court opinions and enforcement decisions.²¹ A centralized online database that is publicly accessible and contains archives of some, if not all, significant decisions rendered by all levels of courts is operational.²² According to Ahi and Sprick, the project increased pressure on individual judges to improve their performance as well as resist interference in their adjudication work, thereby reinforcing court reforms to improve the quality of justice delivered.²³ In addition to the Chinese Judgments Online website,²⁴ the

15 See e.g., Jerome Alan Cohen, ‘Settling International Business Disputes with China: Then and Now’, *Cornell International Law Journal*, Vol. 47, 2014, p. 565; Taisu Zhang & Tom Ginsburg, ‘Legality in Contemporary Chinese Politics’, *Virginia Journal of International Law*, Vol. 1, Issue 1, 2020, pp. 306-389.

16 See Fan, *supra* note 14.

17 See Opinions of the Supreme People’s Court on People’s Courts Further Deepening the Reform of Diversified Dispute Resolution Mechanism, www.court.gov.cn/fabu-xiangqing-22742.html.

18 Courthouse on Horseback is a metaphor that refers to circuit trial in order to facilitate the litigants to participate in the process of litigation, the primary courts will send judges to remote areas with inconvenient transportation and limited materials. The judge will just accept cases, mediate between the litigants ‘on horseback’, and settle the case. See ‘Courtroom on Horseback: Circuit Trial in Chinese Countryside’, *China Justice Observer*, www.chinajusticeobserver.com/a/courtroom-on-horseback-circuit-trial-in-chinese-countryside.

19 The Fengqiao experience is a Mao-era method used by mass groups of citizens to monitor and reform those who are labelled as class enemies. The methods operate on the principle that ten people work together to reform one person so that conflicts are not handled over to higher authorities. Used recently to represent the intention of resolving conflicts within the lower level and among people themselves.

20 Let the Fengqiao experience flourish in the new era, *People’s Daily*, 13 November 2018.

21 White Paper, *supra* note 4, p. 3, Chinese courts regard judicial publicity as an important entry point for the application of Internet technology in the field of justice.

22 See China Judgments Online, <https://wenshu.court.gov.cn/>.

23 See e.g., Bjorn Ahl & Daniel Sprick, ‘Towards Judicial Transparency in China: The New Public Access Database for Court Decisions’, *China Information*, Vol. 32, No. 1, 2018, pp. 8-9.

24 Chinese Judgements Online, *supra* note 22.

Chinese Judgments Enforcement Online website,²⁵ China Judicial Process Information Online²⁶ website and China Trial Process Online²⁷ website were included in the judicial transparency project. These publicly available decision databases became the foundation of the later announced 'Smart Court' campaign, which represented new efforts at providing an accessible and transparent decision database subject to public review, leading to a new era of a more open and transparent 'sunshine justice' in China.²⁸

1.1.2 *The Smart Court Construction*

Overall, with updated access to justice needs in China, technology offers an innovative and cost-effective way of closing the justice gap by allowing justice systems to extend their reach and deliver services to a wider set of beneficiaries.²⁹ The development of the Internet in China is slightly later than that in the Western world, where initial development of the World Wide Web in China occurred only in the mid-1990s.³⁰ However, probably due to the quickly maturing Internet infrastructure and actively endorsing attitude of the Chinese government, the development of the Internet took some sharp turns since early 2000.³¹ As of 2019, China had the world's largest number of Internet users, both through cable and mobile access, estimated at more than 800 million.³² This is partly thanks to the burgeoning e-commerce industry. Probably due to the availability of cheaper products online and better implemented logistic services, since the launch of Taobao in 2003, it has become the world's largest Customer to Customer (C2C) e-commerce platform and has already hosted more than 10 million active sellers and 423 million active buyers.³³ New types of disputes also emerged online, often in large numbers, stemming from these frequent interactions that took place virtually.

As noted by Ethan Katsh, compared with the offline world, the cyberspace is a much more self-contained and self-governed space, posing stronger barriers for external regulators to enter.³⁴ Idealists and optimists of the Internet usually believe that it is entirely possible for disputes arising online to be resolved

25 Chinese Judgments Enforcement Online, <http://zxgk.court.gov.cn/login.do>.

26 China Judicial Process Information Online, <https://splcgk.court.gov.cn/gzfwwww/>.

27 China Trial Process Online, <http://tingshen.court.gov.cn/>.

28 Sunshine Justice, Building the Open, Dynamic, Transparent and Convenient Judicial System, www.chinacourt.org/article/subjectdetail/id/MzAwNEg3gAMA.shtml; See also Yu Zhang & Nicholas Lovrich, 'Portrait of Justice: The Spirit of Chinese Law as depicted in Historical and Contemporary Drama', *Global Media and China*, Vol. 1, No. 4, 2016, p. 372.

29 See also Realizing Justice for All, World Justice Forum Report 2019, p. 25.

30 The Internet in India and China, https://web.archive.org/web/20080328154704/http://www.isoc.org/isoc/conferences/inet/99/proceedings/3a/3a_3.htm.

31 *Id.*

32 See Annual Report on China's Internet Development, China Academy of Information and Technology Communications (2018); See also White Paper, *supra* note 4, p. 1.

33 See Liu & Weingast, *supra* note 3.

34 See Rabinovich-Einy & Katsh, *supra* note 6, p. 647.

completely within the online environment and by online means.³⁵ Therefore, it is not surprising that ODR first developed by efforts of e-commerce platforms, where it was believed that the establishment of trusted ODR systems incentivizes consumers to make purchases.³⁶ In early 2012, Taobao's ODR Center was launched and has developed a set of delicate rules that eventually became the Taobao Dispute Resolution Rules.³⁷

Seeing from Taobao's ODR successes how uses of Internet technology could significantly improve system efficiencies,³⁸ China launched its 'Smart Justice' campaign in late 2016, by announcing the "Five-Year Construction for Information Construction at People's Courts (2016-2020)".³⁹ In 2016, Smart Court Construction became part of the National Development Strategy. Since then, the level of digitalization in the judiciary has astronomically advanced, and three 'Internet Courts' were launched as part of the movement.⁴⁰ By June 2019, the preliminary Smart Court System had taken shape, connecting internal judicial work systems with external litigation service systems.⁴¹ Most of these services are accessible both through personal computer systems and mobile operating systems.⁴² Entries of newer generations of ODR technologies into courtrooms seem to provide a brand-new catch-all solution for both the state and the people, and have been provided with the most abundant state resources.⁴³

Although the transition to online courts has already become a national policy priority, the outbreak of COVID-19 brought unprecedented opportunities for ODR in China. The COVID-19 pandemic occurred earlier in China followed by a lockdown order for the virus's epicentre in Wuhan on 5 February 2020. Thereafter, the entire country went into a strict lockdown status during most of February. Different from social distancing measures, the strict quarantine and physical isolation measures have rendered contact-based or face-to-face dispute resolution impossible. On 18 February, China's Supreme People's Court (SPC) issued the 'Notice on Strengthening and Standardizing Online Litigation during the Prevention and Control of Novel Coronavirus Epidemic', mandating that all court levels in China actively test the use of ODR, establish online mediation

35 See e.g., Louis Del Duca et al., 'Facilitating Expansion of Cross-Border E-Commerce – Developing a Global Online Dispute Resolution System', *Penn State Journal of Law & International Affairs*, Vol. 1, 2012, p. 59.

36 *Id.* (suggesting that ODR providing consumers with the comfort of knowledge the existence of cheap and easy means of obtaining redresses).

37 Taobao ODR Rules, www.taodiantia.com/article/18088.html.

38 See Liu & Weingast, *supra* note 3.

39 Five-Year Construction for Information Construction at People's Courts (2016-2020), http://pkulaw.cn/fulltext_form.aspx?Db=chl&Gid=efabc20ee13ad826bdfb.

40 White Paper, *supra* note 4, p. 65.

41 *Id.*, p. 61.

42 *Id.*

43 Chinese Courts and Internet Judiciary, <http://english.court.gov.cn/pdf/ChineseCourtsandInternetJudiciary.pdf>.

platforms and ensure the availability and quality of ADR measures.⁴⁴ Based on successful experiences managing trial and court-annexed mediation online during the pandemic, the SPC finally issued, on 22 January 2021, for public comment ‘Regulations on Some Issues Related to People’s Courts Handling Cases Online’ – regulations on online hearings, applicable to civil, commercial, administrative and enforcement cases, and certain criminal cases.⁴⁵ The Regulations, after their official passage, will set the proper stage for Chinese courts of all levels to hear cases online.

Several reasons made the Smart Court and the ensuing online court campaigns emerge as some of the priority goals of China’s ongoing judicial reforms. First, Smart Court is a natural extension of continuous reform efforts already geared towards using Internet technology to improve judicial transparency and therefore people’s experiences with the judicial system.⁴⁶ Moreover, by creating a more transparent environment than the traditional courtroom, ODR’s entry strengthens justice by allowing more closer public monitoring. Second, by relying on artificial intelligence (AI) and other types of machine learning-based technologies, efficiency and cost-effectiveness of court proceedings have been largely improved.⁴⁷ By adopting ODR, courts could reduce their caseloads, channelling appropriate disputes to quicker, less expensive and more flexible processes and focus on handling only those disputes for which litigation remained the preferred route.⁴⁸ Third and possibly more importantly to any ODR-led justice system, compared with other types of ADR, ODR is even stronger in its function of minimizing conflicts and preventing conflicts from escalating, fitting closely with the overarching dispute resolution agenda of the Chinese government.⁴⁹ In China, ADR has been historically perceived as an integral measure for achieving social harmony and restoring governing order.⁵⁰ Thanks to data-intensive technology tools, states are more easily equipped with sufficient information to understand where conflicts are, so that early

44 Carrie Shu Shang et al., ‘Two Paths Leading to the Same End? A Discussion of Development and Regulation of Online Mediation Under the COVID-19 in the People’s Republic of China and the United States’, *World Arbitration and Mediation Review*, Vol. 13, No. 1, 2019, pp. 1-22.

45 Regulations on Some Issues Related to People’s Courts Handling Cases Online for Public Comments (关于人民法院在“互联网+”时代“互联网+”的“互联网+”稿), The Supreme People’s Court of People’s Republic of China (22 January 2021), www.court.gov.cn/hudongxiangqing-285071.html.

46 White Paper, *supra* note 4, p. 3.

47 Zhuhao Wang, ‘China’s E-Justice Revolution’, *Judicature*, Vol. 105, No. 1, 2021, pp. 6-17.

48 White Paper, *supra* note 4, p. 9; *see also* Rabinocivh-Einy & Katsh, *supra* note 1.

49 *See* Stephen C. Yeazell, ‘Courting Ignorance: Why We Know So Little About Our Most Important Courts’, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2306775 (discussing how increased tort litigation in the United States contributed to the rise of dispute resolution).

50 *See* Li-Li Huang, ‘Interpersonal Harmony and Conflict for Chinese People: A Yin-Yang Perspective’, *Frontiers in Psychology*, Vol. 14, 2016, pp. 1-14; Fei Long, ‘The Change of Dispute Resolution Mode in the Age of Big Data’, *People’s Court Daily*, 2 November 2016 (originally in Chinese), http://www.moj.gov.cn/Department/content/2019-09/02/582_3233177.html.

intervention becomes more probable.⁵¹ According to Judge Long Fei, who leads the SPC's ADR Reform Unit, based on ODR platforms, gathering and analysing data will enable the justice system not only to streamline and improve its traditional dispute resolution processes, but also identify *why* conflicts occur and in *what* ways.⁵² In this new reality, the focus of dispute resolution moves from the development of law through resolving individual claims to the rigorousness of proactive dispute prevention efforts that make law and policymaking more responsive to the needs of a diverse population. These will together allow the justice system to engage more actively and pre-emptively in conflict prevention, attaining the traditional pursuit of a harmonious society in China.⁵³

2 Searching for the Meaning of ODR in China

In literature, the concept of ODR encompasses a broad array of systems, platforms and programmes, ranging from consultation, blind bidding and technology-assisted negotiation on one end, to online mediation, arbitration, adjudication and automated decision-making on the other.⁵⁴ When people use the expression of ODR, more likely than not they have different things in mind and are describing different procedures or processes.⁵⁵ In recent years, ODR systems have also been increasingly embraced by the courts in many jurisdictions, to transform courts that were traditionally used to relying on human decision-making and physical presence into those gradually more dependent on digital communications, algorithms and automated decision-making tools.⁵⁶

Discussion about ODR in China runs into further definitional challenges. The term ODR has been used in a wider variety of contexts in China, sometimes in ways that differ from those in Western literature. Early ODR programmes were created by China's biggest e-commerce platform, Taobao, to resolve disputes arising out of simple, small-amount and high-volume transactions between online vendors and shoppers.⁵⁷ The successful operation of the Taobao ODR programme was thought to be linked to its capacity to safeguard Internet transactions taking places on its platform. In 2017, Taobao ODR was publicly voted as one of the top ten online governance programmes in China, gaining itself national reputation and strong marketing advantages. It was even used by

51 See Kashmir Hill, 'How Nextdoor Reduced Racist Post by 75%', <https://splinternews.com/how-nextdoor-reduced-racist-posts-by-75-1793861389>; Robert J. Condlin, 'Online Dispute Resolution: Stinky, Repugnant, or Drab', *Cardozo Journal of Conflict Resolution*, Vol. 18, 2017, p. 717.

52 See Condlin, *supra* note 51.

53 See Long, *supra* note 50.

54 See ABA Task Force on Electronic Commerce and Alternative Dispute Resolution, *Addressing Disputes in Electronic Commerce*.

55 See Condlin, *supra* note 51.

56 See Rabinovich-Einy & Katsch, *supra* note 1, p. 165.

57 *Id.*

the Chinese state to be part of a national anti-online counterfeiting campaign.⁵⁸ Before long, more advanced ODR programmes emerged on public justice platforms. Most of these earlier ODR programmes used by courts, including those used by all levels of courts in Zhejiang province and other courts in Guangdong, Jiangsu, Hainan, Anhui and Yunnan, involve mediation or other types of early-stage dispute evaluation. They are either independently operating⁵⁹ or are associated with professional associations or local arbitration and mediation commissions.

This huge spectrum of ODR programmes present challenges in searching for the meaning of ODR in China. By looking at different contexts where a variety of ODR programmes have been implemented over the past decade, we argue that to be eligible for the definition of ODR in China, the system must encompass an Internet platform that allows resolution of disputes with the assistance of Internet-related technology and use either an algorithm-based decision-making mechanism or a human neutral to render decisions online. On the basis of this definition, three different initiatives emerged to represent major types of ODR programmes in China: self-contained ODR platforms, private online ADR service platforms and online courthouses.

2.1 Self-Contained ODR Platforms

As China's first and most important self-contained ODR platform, Taobao's ODR Center was launched as early as 2012, and developed a set of delicate rules that eventually became the Taobao Dispute Resolution Rules.⁶⁰ In its early days, the Taobao ODR system simply adopted a text-based negotiation assistance program and specialized in resolving buyer-seller disputes. When a buyer submits a certain claim against the seller concerning the quality of a product purchased online, Taobao ODR Center can make decisions within 10 days, on the basis of evidence submitted by both parties. Gradually, Taobao ODR Center also started to take claims submitted by brand owners alleging existence of counterfeit products online. Once such a case is taken, it is presented to a Taobao adjudicator, who is usually a Taobao employee and member of its ODR team. If it is found that the particular product sold online is infringing a brand owner's intellectual property rights, the product might be removed or taken down immediately. As part of the penalty system, Taobao can lower the violating user's rating, temporarily close down an online store or a Taobao account associated with a fraudulent online store or ban an account completely.⁶¹

Although Taobao does utilize big-data analytics to review user information and identify suspicious activity, its online determination system is largely manual. In other words, a human adjudicator will need to review the case to determine if a particular product sold online is a counterfeit. To outsiders, it is

58 Lim Yan Liang, 'Alibaba Claims Success in Fight Against Fake Goods on Taobao', *The Straits Times*, 14 January 2019, www.straitstimes.com/asia/east-asia/alibaba-claims-success-in-fight-against-fake-goods-on-taobao.

59 From ODR to Internet Courts, www.chinacourt.org/article/detail/2017/11/id/3071479.shtml.

60 Taobao Dispute Resolution Rules, *supra* note 37.

61 *Id.*

not exactly clear how technology is used in facilitating the dispute resolution process, although recently published research by the Alibaba team highlights the use of machine learning and other algorithm-based mechanisms in designing these complex structures.⁶² Apparently and based on numerous sources, the Taobao system also relies on data obtained from consumers to detect suspicious online activities and to counter fraud.⁶³

In order to increase the perceived fairness and transparency of the system, a jury-like adjudication system was introduced into Taobao ODR in December 2012, which is called the Taobao User Dispute Resolution Center, or the Taobao Public Court.⁶⁴ With the jury-like system, when a dispute occurs the party initiating a case at Taobao usually has two options: 1) asking a designated Taobao employee to adjudicate or 2) using a jury-like panel of public adjudicators. Members from the Taobao community can volunteer to become Taobao public jurors and are selected on the basis of a combination of factors used by Taobao to determine their reputation within the Taobao ecosystem. They are then empanelled to decide claims submitted online.⁶⁵ For example, if an intellectual property owner submits a claim against an online listed item for potentially infringing its brand, the complainant can choose for the case to be decided by Taobao's public jury. By a majority voting process, the public jury then decides if there is a likely violation, and if the seller should be penalized for selling the potentially infringing item. This system allows Taobao to address a large and growing number of complaints. As of March 2018, Taobao public jurors had resolved more than 2 million disputes in total,⁶⁶ and as claimed by Alibaba, Taobao's ODR platform successfully handles hundreds of millions of disputes each year.⁶⁷

2.2 Private Online ADR Service Platforms

Apart from self-contained ODR platforms, one of the first recorded private ODR programmes in China was the ODR Court affiliated with the China International Economic and Trade Arbitration Commission (CIETAC).⁶⁸ Although named 'ODR Court', the major type of service provided by the CIETAC ODR Center, which qualifies for the modern definition of ODR, is its domain name dispute resolution services.⁶⁹ As the Secretary General of CIETAC and the former head of the CIETAC ODR services, Dr. Li Hu described, the Center "devotes itself to providing online alternative dispute resolution services in the areas of intellectual property

62 Alibaba Posts One of Its Top AI Algorithms to Github, www.alizila.com/alibaba-cloud-open-sources-machine-learning-algorithm-on-github/.

63 *Id.*

64 Taobao User Dispute Resolution Center, pan.taobao.com.

65 *Id.*

66 Alibaba Public Governance Annual Report 2018, p. 11.

67 See Rabinovich-Einy & Katsh, *supra* note 6, p. 647.

68 Zhao Yun et al., *Online Dispute Resolution in Asia*, *Online Dispute Resolution: Theory and Practice*, 1st edition, Eleven International Publishing, Hague, the Netherlands, 2012.

69 Li Hu, CIETAC Online ADR practice: Domain Name Dispute Resolution System, www.softic.or.jp/symposium/open_materials/11th/en/LiHudomain.pdf.

and information technology”.⁷⁰ As a type of web-based dispute resolution service provider accredited by the Internet Corporation for Assigned Names and Numbers (ICANN), domain name dispute resolution is used to resolve disputes concerning ownership of a registered domain name between a trademark owner and an alleged cybersquatter, by engaging a panel of registered domain name experts as the adjudicator.⁷¹ It is conducted in ways similar to an online arbitration, while domain name decisions are usually rendered and immediately implemented online by ICANN.

In 2010, China’s E-Commerce Related Disputes Mediation Platform was launched. The platform ‘Dian Su Bao’ engages an online portal for consumers to file their electronic complaints and then engages external mediators to attempt to resolve the disputes through online mediation.⁷² Compared with Taobao’s self-contained ODR platform, Dian Su Bao is external to any e-commerce company, but is affiliated to an e-commerce business association that China’s major e-commerce companies are members of.⁷³ According to the association’s membership terms, consumer complaints against any member e-commerce company could be filed online through Dian Su Bao. The platform then engages a third party neutral to resolve the complaints, usually for a small fee. As a reputation-sanction system, complaints or feedbacks are directly posted on the Dian Su Bao website, to warn consumers of potentially abusive behaviours of member e-commerce companies. Of course, consumers can also post negative feedback on the e-commerce platform or any related online forum. The China Council for the Promotion of International Trade (CCPIT) also launched its “Online Mediation Platform”, similar to Dian Su Bao, which contains an e-mediation portal allowing online filing of requests for mediation and some limited level of online mediation.⁷⁴

However, with the exception of CIETAC’s domain name dispute resolution services, most other private online ADR service platforms have not been able to greatly expand their business. Compared with a self-contained ODR forum, private service platforms have some significant disadvantages: with a self-contained dispute resolution forum, the marketplace can rapidly respond to parties that fail to comply. More often than not, the payment system internal to the marketplace is somewhat linked to the ODR system. When the losing party fails to comply, it can result in delay in payment or even reversal of charges. The use of these internal payment systems is an important means of compliance and

70 *Id.*

71 *See generally* Uniform Domain Name Dispute Resolution Policy, ICANN, www.icann.org/resources/pages/help/dndr/udrp-en.

72 Dian Su Bao – Platform for Resolving E-Commerce Consumer Disputes, <http://show.s.315.100ec.cn/>.

73 Dian Su Bao – About Us, http://show.s.315.100ec.cn/index.php?_a=product&f=about.

74 E-Mediation, <https://adr.ccpit.org/>.

is often heralded as an essential feature of successful private ODR platforms.⁷⁵ However, lacking effective enforcement measures, although these private ODR platforms allow some innovative and flexible ways of resolving disputes in online forms, their use seems to be rather limited in China.

2.3 Online Courthouses – China’s Smart Courts

It is often agreed that many benefits of self-contained ODR platforms can be replicated in public ODR systems.⁷⁶ In 2015, Alibaba entered into a collaboration with Zhejiang High People’s Court for the ‘E-Commerce E-Court’ project, agreeing to assist in incorporating platform technologies into Zhejiang courts’ trial processes to move the resolution of a number of e-commerce disputes online.⁷⁷ The operation of the E-Commerce E-Court was intended to make it more convenient for litigants to resolve their e-commerce-related judicial claims through online means.⁷⁸ The Hangzhou Internet Court was launched in mid-2017, the first online courthouse established by the Chinese judiciary to explore ODR systems and ODR-related technologies that could be implemented by courts.⁷⁹ In the middle of 2018, the first court-affiliated ODR platform, the Online Diversified Dispute Resolution Platform, was launched in Zhejiang and adopted by all level of courts in the province.⁸⁰

As the first Internet Court in China, when the Hangzhou Internet Court was first established, it was unclear what its name entailed. Soon, reforms were conducted by the Hangzhou Internet Court to suggest that the meaning of an Internet Court in China is multifold. First, the Hangzhou Internet Court has been empowered to adjudicate a broad range of case types that are loosely related to the Internet. It was specifically authorized to adjudicate six major types of Internet-related disputes within the jurisdiction of all basic-level courts within the city of Hangzhou: Internet shopping, services, microfinance loans and other contractual disputes; Internet copyright ownership and infringement disputes; disputes related to using the Internet to violate the personality right of others; product liability infringement disputes arising from online shopping; domain

75 Vikki Rogers, *Knitting the Security Blanket for New Market Opportunities – Establishing a Global Online Dispute Resolution System for Cross-Border Online Transaction for the Sale of Goods*, *Online Dispute Resolution: Theory and Practice*, 1st edition, Eleven International Publishing, Hague, the Netherlands, 2012.

76 Ayelet Sela, ‘The Effect of Online Technologies on Dispute Resolution System Design: Antecedents, Current Trends and Future Directions’, *Lewis and Clark Law Review*, Vol. 21, 2017, p. 633; Schmitz, *supra* note 2.

77 ‘Courting the Internet’ – Interview of Sara Yu, General Counsel, Alibaba Inc., 22 November 2019, *China Business Law Journal*, www.vantageasia.com/courting-internet-sara-yu-hangzhou/.

78 *Id.*

79 ‘China Launches First Internet Court in E-Commerce Hub’, *Xinhua News*, www.xinhuanet.com/english/2017-08/18/c_136537234.htm.

80 By 8 January 2020, there are more than 1.18 million registered users and over 5.67 million total visits. The total number of disputes mediated on the platform was 725,328. The platform had completed 823,925 smart consultation also.

name disputes; administrative disputes caused by Internet-related regulations.⁸¹ Therefore, by centralizing jurisdiction over major types of disputes loosely related to the Internet, the Hangzhou Internet Court has become a court that specializes in disputes arising from any possible use of the Internet.

Second, the Hangzhou Internet Court and two other Internet Courts and other more generally termed 'Smart Courts' established later are all encouraged to explore ways of incorporating emerging Internet technologies into existing court dispute resolution mechanisms to transform the traditional trial processes. In constructing the Hangzhou Internet Court, platform technologies have been largely incorporated to build portals used for online litigation, online mediation, electronic evidence storage, online document service, online enforcement and online judgment publication. Besides those basic functions that were already used to smooth out case filing and case management processes, the introduction of streaming technology has made visualization of the judicial process more likely, so that the physical and emotional distance between the judiciary and the people is further reduced. Although ethically debatable, using AI tools and robotic technologies to facilitate automatic decision-making has also been made possible through these pilot programmes.⁸²

One year into the Hangzhou Internet Court's operation, the 'Plan for Establishing the Beijing Internet Court and the Guangzhou Internet Court' was passed by China's Central Reform Committee, in 2018.⁸³ Accordingly, the second and third Internet Courts in China were, respectively, established in Beijing and Guangzhou. Compared with the experimental measures implemented in establishing the Hangzhou Internet Court, which are considered rather organic given Hangzhou's geographical proximity to China's e-commerce sectors, it looks like the addition of the Guangzhou and Beijing Internet Courts represents more deliberate choices of the state. Although the Guangzhou and Beijing Internet Courts were established after the Hangzhou Internet Court, within one year of establishment, both of them had higher caseloads than the Hangzhou court. According to official statistics, the Beijing court has handled over 40,000 cases since its establishment, and all of them were filed online.⁸⁴ The Guangzhou court took over 30,000 cases between 2018 and 2019.⁸⁵ At the same time, reforms leading to the incorporation and in-depth utilization of ODR technologies in courtrooms were encouraged at-large, and are not restricted to the three Internet Courts, establishing the foundations of the 'Smart Court Construction' campaign.

81 See Art. 2, Provisions of the Supreme People's Court on Several Issues Concerning the Trial of Cases by Internet Courts.

82 These new technologies that have been used in China's internet courts will be further explored in Part III of this article.

83 See The Plan for Establishing the Beijing Internet Court and the Guangzhou Internet Court, www.bjinternetcourt.gov.cn/cac/zw/1535271968917.html.

84 White Paper, *supra* note 4, p. 6.

85 For example, by 26 August 2019, 32,428 people registered to join the Guangzhou ODR platform. There has been a total of 116,517 visits, 13,126 smart consultations, 17,508 cases accepted for mediation, 16,501 successful mediations. See Wenli Guo, 'The Four Major Judicial Innovations of China's Guangzhou Internet Court', *China Law Connect*, No. 6 (September 2019).

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Overall, the ‘Smart Court Construction’ campaign in China represents reforms both in technological applications and dispute resolution rules. Compared with private ODR systems, China’s Smart Courts are judicially supported like any other type of traditional court by access to experienced judges and support staff, and are backed up by the state enforcement mechanism. Therefore, they offer considerable advantages compared with private ODR forums, for which accreditation, self-regulation and payment restrictions are usually necessary to foster compliance. Ideally, these digitalized systems are easier to use, and allow parties to conduct full judicial proceedings online in a cost-effective manner. At the same time, rule reforms that revolutionized trial and pre-trial ADR experiences were also actively undertaken. The official establishment of Internet Courts in China presented novel opportunities for the judiciary to deepen judicial reforms that particularly cater to the needs of Internet-related cases through the intervention of technology. By the same token, since the very beginning, China’s ‘Smart Court Construction’ campaign has carried out the special missions of updating justice values and system dynamics in the era of the Internet.⁸⁶

3 A Deep Look at China’s Smart Courts: Uses of ODR Technologies

In terms of technologies, ODR is a broad term covering a range of different things. In general, these technologies are associated with Internet platforms, and enable judges and disputing parties to handle disputes by communicating, reviewing documents, storing evidence and rendering and recording decisions online. More than before, they also allow courts to rely on algorithm-based decision making tools to further tailor dispute prevention techniques to parties’ needs.⁸⁷

Broadly, we divide ODR technologies used in Chinese courts into three categories, according to their slightly different attributes in the dispute resolution process: 1) technologies that support or optimize existing processes of administering dispute resolution, 2) evidence preservation and authentication technologies and 3) AI and robotic technologies used in decision-making processes.

The first type of ODR technology, technologies that support or optimize existing processes of administering dispute resolution, are technologies mainly implemented to improve judicial efficiency and cost-effectiveness. These technologies usually assist traditional dispute resolution processes rather than change decision-making foundations.

The second type of ODR technology mainly includes blockchain and smart contract technologies. They have been introduced to online courts considering the special needs that have arisen in the digitalized judicial environment, such as

86 See White Paper, *supra* note 4, p. 63.

87 See John Zeleznikow, ‘Can Artificial Intelligence and Online Dispute Resolution Enhance Efficiency and Effectiveness in Courts’, *International Journal for Court Administration*, Vol. 8, No. 2, 2017, pp. 30-45.

Table 1 *Major ODR Technologies Used in China's Smart Courts*

ODR Technology	Type	Dispute Resolution Phases	Examples
Robotic Process Automation	III	Adjudication	Beijing Internet Court: AI Virtual Judge Hangzhou Internet Court: AI Judge Assistant
Knowledge Mapping	III	Mediation, Post Adjudication	Zhejiang provincial courts ODR App
Speech Recognition	I	Adjudication	Beijing Internet Court
Facial Recognition	I	Adjudication	All three Internet Courts
VR/AR	I	Adjudication	Fujian Provincial Court
Big Data Analytics	III	Adjudication, Post Adjudication	Guangzhou Internet Court
Blockchain	II	Mediation, Adjudication	All three Internet Courts
Smart Contract	II, III	Post Adjudication	Guangzhou and Hangzhou Internet Courts
5G	I	Adjudication	Guangzhou and Hangzhou Internet Court Online Courtroom
Optical Character Recognition	I	Post Adjudication	Beijing Internet Court

online evidence tracing, collection, storage, preservation and authentication, and are essential in ensuring additional safeguards for the ODR process.

The third type of ODR technology comprises mainly AI, machine learning and other types of data-dependent robotic processes that revolutionize the traditionally human-dominated justice delivery processes. By possibly replacing manual decision-making with algorithm-based decision-making performed by virtual judges, this type of technology has the potential to fundamentally re-engineer the dispute resolution process. These three types of ODR technologies engaged by China's Smart Courts are further illustrated in Table 1, where they are mapped to different stages of the trial process.

3.1 Type I: Process Optimization Technologies

3.1.1 Speech Recognition

Speech recognition technologies predict the context of dialogue, centrally process and analyse sound signals and efficiently translate the spoken language into text by using super large-scale language pattern recognition and self-learning

technology.⁸⁸ Since speech recognition technologies can be applied to multiple scenarios, they are well-adapted to online courtrooms. In China, speech recognition has been fully used in the automatic generation of court transcripts, mediation transcripts, interview transcripts and meeting minutes, which effectively improves the efficiency of court record entry. These speech recognition systems can turn spoken words into written documents in real time, thus greatly improving work flows of the court and relieving the pressure on court clerks. According to official statistics, the speech recognition system engaged by the Beijing Internet Court had automatically generated 5,970 court transcripts, more than 4,300 documents and more than 400 meeting minutes by 8 August 2019.⁸⁹ By engaging a speech recognition system that can carry out voice-to-text transcription during court hearings, the workload of judges at an Intermediate People's Court in Suzhou has decreased by about 40%, while that for clerks has reduced by almost 50%.⁹⁰

3.1.2 Facial Recognition

Computer Vision Technology is the science that allows computers to imitate the human vision system, so that computers have the ability to extract, process, understand and analyse images like humans.⁹¹ As a typical application of Computer Vision Technology, facial recognition tools can detect and track the human face in image or video streams, and identify the person based on facial features.⁹² In the process of ODR in China, the application of facial recognition mainly focuses on the remote authentication of the identities of participating parties. The 'Mobile Court' litigation service platform constructed via WeChat, the most popular mobile chat app in China, employs facial recognition and remote audio and video systems so that judges and litigants can easily use mobile phone photos to conduct online litigation activities, thereby increasing the accessibility of online courts.

3.1.3 Virtual Reality (VR) and Augmented Reality (AR)

VR and AR are new audio-visual technologies with computing operational systems at the core, and are mainly utilized to increase transparency of the trial processes and create an immersive experience for users. They offer a simulated digital environment within a certain range that is highly similar to the real-life setting in terms of vision, hearing and so on. Users' interaction with specific objects in the digital environment needs dedicated devices; then, they may feel like they are immersed in the real world and have a multidimensional sense of

88 See China Electronics Standardization Institution, White Paper on Artificial Intelligence Standardization (2018), www.cesi.cn/images/editor/20180124/20180124135528742.pdf.

89 *Id.*

90 See Suzhou Intermediate People's Court Takes 'Electronic Files, Voice in Trial and Intelligent Services' as The Core to Provide a New Template for the Court Informatization 3.0, *The Mirror*, 12 May 2018.

91 See China Electronics Standardization Institution, *supra* note 88.

92 See Ning Sha & Lihe Ma, 'Research on the Application of Facial Recognition Based on Computer Vision', *Technology & Business*, No. 14, 2014.

immediacy.⁹³ On 20 June 2019, the Siming District Court in Xiamen, Fujian Province, adopted VR technology while conducting hearings on a copyright dispute concerning “The Alley” trademark owned by a famous Chinese beverage company.⁹⁴ VR cameras were set up in the court for 360-degree shooting, so that spectators outside the courtroom could watch the live hearing in real-time streaming by wearing VR headsets.⁹⁵ In October 2019, the Beijing Internet Court also introduced the new technology of ‘Sharing Trial Screen’, based on which the judge can easily screen evidence provided by a remotely sitting litigant, and conduct live broadcasting of the trial process. These tools are implemented in Smart Courts to significantly improve judicial transparency.⁹⁶

3.1.4 5G Technology

5G is another area that China has recently emerged as a world leader. It is the latest generation of cellular communication technology, rapidly boosting the speed of Internet communication.⁹⁷ Its data transmission rate is much higher than that of any previous cellular network, and can be up to 10Gbit/s. It is faster than the current wired Internet, and 100 times faster than the previous 4G Long Term Evolution (LTE) cellular network.⁹⁸ The application of 5G technologies in the judicial field is mainly to ensure the high-speed and smoothness of multimedia communication and data transmission. Especially in online video trials, 5G can reduce the interference of network problems and maintain clear and smooth audio-visual transmission to ensure the best user experience. For example, on 13 June 2019, the Guangzhou Internet Court used 5G technologies to complete an administrative litigation online for the first time, offering high-resolution images.⁹⁹ In addition, the Hangzhou Internet Court combined 5G technology with blockchain and launched the ‘5G+Blockchain’ trial mode, a new mode of trial execution involving network technologies, on 20 June 2019. 5G +Blockchain provides an efficient, reliable and low-latency communication environment for blockchain evidence storage by using 5G.¹⁰⁰

3.1.5 Optical Character Recognition (OCR)

OCR is the process by which electronic devices (such as scanners or digital cameras) are used to examine characters printed on paper, determine the shape

93 See Hangyu Shi, ‘Application of VR in Future Criminal Court Investigation’, *Journal of Public Security – Journal of Zhejiang Police College*, No. 6, 2018.

94 See Changping Yang et al., Watch the Trial “On the Spot”, The First 5G+VR Trial in China was Held in Siming Court, Xiamen, http://m.sohu.com/a/322150129_100253941.

95 *Id.*

96 ‘A Cell Phone is a Court, Four Internet Technologies Help Judicial Trials’, *Beijing Daily*, 19 August 2019.

97 Stu Woo, ‘In the Race to Dominate 5G: China Sprints Ahead’, *The Wall Street Journal*, www.wsj.com/articles/in-the-race-to-dominate-5g-china-has-an-edge-11567828888.

98 *Id.*

99 See Zhiming Yang et al., ‘The First Administrative Case Tried Online Using 5G in China Has Been Opened’, <https://www.chinanews.com/sh/2019/06-13/8863638.shtml>.

100 Ke Hou et al., ‘Hangzhou Internet Court Pioneered “5G+Blockchain” New Mode of Execution Involving Network’, www.rmfbz.org.cn/dfzcontents2/376/217971.html.

by detecting character shades and brightness and then translate the shape into computer text through character recognition. For printed characters, OCR technologies could convert texts into image files and convert texts in image files to texts for further editing and word file processing.¹⁰¹ At present, the application of OCR in ODR is mainly limited to the scanning of parties' relevant text materials and the automatic generation of electronic files.

3.2 Type II: Evidence Storage and Authentication Technologies

Since court files and evidence are largely digitalized for uses of online dispute resolution, preservation and presentation of digitalized evidence present some uniquely new challenges to the judiciary. In China, blockchain technologies are often used to assist online evidence storage and authentication procedures.

3.2.1 Blockchain Technologies

Blockchain is a distributed ledger and database that is decentralized, tamper-proof, open and transparent.¹⁰² By allowing information to be entered into the system and stored in different locations, it records the whole process of transactions in a secure way so that every step can be easily traced. These features ensure the 'honesty' and 'transparency' of the dispute resolution process and minimize trust issues arise during online trials.¹⁰³

Article 11, paragraph 2 of the SPC on 'Provisions of Several Issues Concerning the Trial of Cases by Internet Courts', a court directive that came into effect on 7 September 2018, stipulates that if the authenticity of electronic data submitted by the parties can be proved through the authentication of electronic signatures, trusted timestamping, hash verification, blockchain and other technological means for evidence collection, fixing and tamper-proofing or electronic platforms for evidence collection and storage, Internet Courts should allow admission of such evidence.¹⁰⁴ All three Internet Courts in China have implemented certain blockchain technologies in constructing their online evidence storage systems. The 'Judicial Blockchain Platform' of the Hangzhou Internet Court, 'Tianping Blockchain' of the Beijing Internet Court and 'Online Platforms and Blockchain' of the Guangzhou Internet Court are typical applications of blockchain. These systems are used to consolidate and store online evidence.

Data shows that the total number of evidentiary record stored in the Judicial Blockchain Platform of the Hangzhou Internet Court had exceeded 1.98 billion as of October 2019.¹⁰⁵ As of 8 August 2019, Tianping Blockchain of the Beijing Internet Court had collected more than 6.4 million pieces of evidence online, stored tens of millions of pieces of evidence across chains and verified 1,312

101 OCR-Optical Character Recognition Explained, <https://docparser.com/blog/what-is-ocr/>.

102 Amy J. Schmitz & Colin Rule, 'Online Dispute Resolution for Smart Contracts', *Journal of Dispute Resolution*, Vol. 2019, No. 2, 2019, pp. 104, 107.

103 See Zheng Li, 'Blockchain, A Breakthrough of Overtaking', *People's Daily*, 4 November 2019.

104 SPC Several Issues Concerning the Trial of Cases by Internet Courts.

105 Wenjing Liu, Hangzhou Internet Court: The Total Number of Evidence on Judicial Blockchain Platform Exceeded 900 Million, Difficulties of Evidence Collecting and Storing were Cracked, http://news.k618.cn/dj/201907/t20190712_17513047.html.

pieces of cross-chain evidence in trials of 218 cases.¹⁰⁶ As of 27 September 2019, the blockchain-based online platform of the Guangzhou Internet Court had stored 20,167,106 pieces of evidence that comprised 7,952,027 electronic contracts, 7,483,119 e-commerce orders and 4,731,960 copyrights, and involved 345 cases.¹⁰⁷

In the 2018 *Hangzhou Huatai Media Culture Media Co. Ltd. v. Shenzhen Daotong Technology Development Co. Ltd.* case decided by the Hangzhou Internet Court, blockchain-based evidence was accepted by the Chinese judiciary for the first time.¹⁰⁸ In this case, facts of copyright infringement were preserved on the third-party platform in the form of blockchain. However, although the court found blockchain-based evidence admissible, in its judicial rationale it reviewed and authenticated blockchain-based evidence according to existing standards in Chinese evidence laws. This was to the dismay of many practitioners, who were waiting for courts to formulate new standards reflecting the technical characteristics of blockchain-based evidence.¹⁰⁹

3.2.2 Smart Contract

Different from traditional contract, smart contract is essentially a computer code. According to a Chinese scholar, “The smart contract is a computer program which can automatically execute the terms of the agreement”.¹¹⁰ These contracts are spread across blockchain nodes distributed throughout the world.¹¹¹ Although most do not fully comprehend smart contract, advocates of smart contract in legal fields believe that smart contracts may largely eliminate the need for complicated legal documents, such as letters of credits, bonds and security agreements, by digitizing automatic enforcement.¹¹²

On 24 October 2019, the Hangzhou Internet Court first defined self-executing contract terms in digital forms by relying on smart contract technologies, and then stored the contract on blockchain. In this way, it fully established the process of ‘voluntary signing-automatic performance-automatic filing’¹¹³. And when the contract is not enforced, the embedded code leads to trial and possible automatic enforcement, which fully transforms the online litigation

106 China Electronics Standardization Institution, *supra* note 88.

107 Guangdong Zheng Fa Wang, The Data of Smart Platforms on The First Anniversary of Guangzhou Internet Court, www.gdzf.org.cn/zwgd/201909/t20190929_1015273.htm.

108 White Paper, *supra* note 4, p. 111, *see also* Wolfie Zhao, China’s Supreme Court Recognizes Blockchain Evidence as Legally Binding.

109 *See* Pengpeng Shi & Bei Ye, ‘Evidence Value of Blockchain Technology’, *Prosecutorial Daily*, 17 April 2019, p. 3, <http://blockchain.people.com.cn/n1/2019/0417/c417685-31034754.html>.

110 Ming Gong, *Blockchain Society – Decoding Global Blockchain Application and Investment Cases*, 1st edition, Beijing, CHINA CITIC Press, 2016, p. 31.

111 David Zaslowasky, What to Expect When Litigating Smart Contract Disputes, www.law360.com/articles/1028009/what-to-expect-when-litigating-smart-contract-disputes.

112 Jakub J. Szczerbowski, Place of Smart Contracts in Civil Law: A Few Comments on Forms and Interpretation.

113 Supreme Court of People’s Republic of China, Guangzhou Internet Court was established to Contribute Guangzhou Wisdom to the Rule of Law in Cyberspace Governance, 28 September 2018, www.court.gov.cn/zixun-xiangqing-121041.html.

process for simple contracts.¹¹⁴ On 30 October 2019, the Beijing Internet Court embedded a smart contract into a mediation case and realized the first instance of automatic execution of a mediation settlement in the country. This process deeply integrated and utilized data available on chains and the judicial information system off chains, which is said to have innovated the model of ‘Smart Justice’.¹¹⁵

3.3 Type III: AI and Robotic Processes

Automated decision-making backed up by algorithm and Big Data analytical tools are thought to be one salient feature of contemporary ODR, although there are usually additional ethical concerns associated with the implementation of these sets of technologies.¹¹⁶ In searching for new technologies to be embedded in China’s online courts, system designers have demonstrated overwhelming passion in AI driven tools.

3.3.1 Knowledge Mapping

A knowledge map, which is a graph data structure consisting of nodes and edges, is essentially an ‘inventory of knowledge’. It describes the concepts, entities and their interrelationships in the physical world through symbolic forms and forms a knowledge structure network.¹¹⁷ Knowledge mapping is one of the most popular techniques used to identify knowledge in organizations. Using knowledge mapping, a large and complex set of knowledge sources can be acquired and navigated more easily.¹¹⁸ Currently, applications of knowledge mapping in Chinese courts include One-Click Generation of Judicial Documents, Intelligent Consultation, and Intelligent Push of Regulations and Cases. For example, the Yuhuan County Court in Taizhou, Zhejiang Province, has used this technology to generate hundreds of adjudicative documents and more than 2,000 other litigation documents.¹¹⁹ The Intelligent Search and Push Functions, Online Consultation, Automatic Generation of Mediation Documents applications implemented on the Zhejiang ODR platform also rely on this technology.

3.3.2 Robotic Process Automation (RPA)

Among robotic technologies, RPA is a technology application that automates business processes by configuring process robots to collect and interpret transactions, process data, trigger responses and interact with other information

114 See Yuqi Guo, The First Application of Smart Contract in The Field of Justice in China, <https://finance.sina.com.cn/blockchain/roll/2019-10-25/doc-iicezzrr4841055.shtml>.

115 Yan Zhao et al., ‘Beijing Internet Court Has Achieved the First One-click Filing of Execution’, *People’s Daily*, 30 October 2019.

116 See e.g. Schmitz, *supra* note 2.

117 See Beijing Internet Court, *White Paper on the Application of Internet Technology in Judicial Practice (2019)*, www.bjinternetcourt.gov.cn/cac/zw/1566024698818.html.

118 Ali Saleh Balaid et al., *A Comprehensive Review of Knowledge Mapping Techniques, A World Without Jews*, Yale University Press, New Haven, CT, 2015, p. 71.

119 See Yuxuan Ying Yan Lu, Reduce the Burden on Judges, One-click Generation of Judicial Documents, <http://yhnews.zjol.com.cn/yuhuan/system/2017/03/10/021107660.shtml>.

systems to automate any transactional work process. In China, these process robots have been used in judicial services, as the so-called AI virtual judges.¹²⁰ These AI virtual judges can carry out 24 hours of uninterrupted work according to the established rules, every day for seven days a week. Their working efficiency is said to be five times higher than that of manual operation, and standards of their operational product do not deviate.¹²¹ At the same time, these process robots can mimic human decision-making processes in delivering logically sound judgments. In China, the Beijing Internet Court has begun using the AI virtual judge, and the Hangzhou Internet Court has started using the AI judge assistant.¹²² These AI virtual judges and judge assistants are conducting repetitive case-related work to improve judicial efficiency as well as reduce the work pressure on human judges. Some of them could even mimic the specific writing styles of certain judges if programmed to do so. From an efficacy perspective, the use of RPA also mandates a level of standardization among judicial opinions, putting pressure on judges to deliver higher quality opinions.

3.3.3 *Big Data*

Big Data is a broad concept. The characteristics of Big Data include enormous data volumes, high data velocity, multiple data types and low value density.¹²³ Big Data can provide reference for judicial management and risk prevention, because it can summarize and analyse regular and useful information from large sets of data through data collection, data processing, data analysis, visualization and other core technologies.

As an initial step, Big Data collects massive judicial data and uses mathematical algorithms to organize these data into different judicial databases. These databases can provide strong data support for legal consultations, future search of legislations and cases and even recognition of identities. At a later stage, by data analytics, Big Data can coordinate resources and integrate forces, providing an important reference for building and perfecting diversified dispute resolution processes.¹²⁴

More essentially, the core function and value of Big Data technology lies in mining and forecasting: by mining the information of similar cases, Big Data deepens understandings of background and rationales of each of them, making it possible to apply consistent legal standards to these factually similar cases determined by statistical correlation. In addition, Big Data is also used to learn about behavioural patterns in the aggregate. These patterns emerged from Big Data analysis of dispute resolution outcomes help to predict results in future case

120 In Brave New Worlds of China's digital courts, judges are AI and verdicts come via chat app, <https://news.yahoo.com/ai-judges-verdicts-via-chat-app-brave-world-112141380.html>.

121 Hangzhou Courts Engages Virtual Judges, <https://finance.sina.cn/2019-12-09/detail-iihnzahi6186143.d.html?from=wap>.

122 *Id.*

123 See Yujuan Li & Fan Yang, 'Application of Big Data and Artificial Intelligence in "Smart Court"', *Communication & Information Technology*, Vol. 69, Issue 2, 2019.

124 See Jia Hou, 'The Application of Judicial Big Data and Construction of the Diversified Dispute Resolution Mechanism', *People's Daily*, 22 December 2017.

scenarios, especially when similar cases emerge in classes. For example, on 10 August 2019, the Batch Intelligence Review system of the Guangzhou Internet Court was implemented with the support of a powerful class trial database to achieve group filing, group trial and group judgment processing.¹²⁵ Under this system, factually similar cases as discovered by Big Data could be decided at the same time on the basis of more consistent decision-making standards.

4 The Digitalized Justice Experience

The shift to ODR in China is likely to profoundly impact laws and judicial systems. Traditional justice slowly built up in contemporary China is safeguarded by due process and substantive jurisprudence but is being increasingly replaced by 'ODR-led justice', which revolutionized the way justice is delivered and the overall justice experience. These newly emerging ODR-connected courts further blur boundaries between different phases of the trial process, and more naturally incorporate ADR into judge-led dispute resolution procedures. By allowing more direct participation and engagement of litigants in the process, ODR-led justice also changed the interactive dynamics between traditional justice stakeholders, including judges, lawyers and disputants.¹²⁶ More importantly, by relying on machines to produce correlations across vast amount of data, the shift in justice values has facilitated greater use of algorithm-based decision-making and dispute prevention.¹²⁷ Therefore, ODR-led justice is much more than merely moving physical courthouses online by providing cost-effective options to litigants and judges by the aid of Internet technologies; it has drastically reshaped the way justice is supplied and perceived in China.

Table 2 highlights some key differences between traditional justice and ODR-led justice. However, by developing a fully functioned ODR-connected court systems in less than five years' time, many aspects of China's law and legal system the legal system are slow to respond to those changes. Here we discuss three major areas in the Chinese legal system that will be drastically impacted by the rise of ODR-led justice – role of courts and legal professionals, due process rights and information safety – and analyse and evaluate whether these justice-related values have been updated to seize opportunities in this new era. Yet, it remains to be seen how this sudden rise of ODR-led justice in China will eventually change the law itself.¹²⁸

125 One Year into Guangzhou Internet Court, www.court.gov.cn/zixun-xiangqing-187681.html.

126 J.J. Prescott, 'Improving Access to Justice in State Courts with Platform Technology', *Vanderbilt Law Review*, Vol. 70, No. 6, 2016, p. 1993; Ayelet Sela, 'Streamlining Justice: How Online Courts can Resolve the Challenges of Pro Se Litigation', *Cornell Journal of Law and Public Policy*, Vol. 26, 2016, p. 331.

127 See generally, Brett Chapman, Research on the Impact of Technology on Policing Strategy in the 21st Century, RTI International Public Executive Research Forum Final Report, 2016.

128 See Daniel L. Chen, 'Judicial Analytics and the Great Transformation of America Law', *Artificial Intelligence and Law*, Vol. 27, 2019, p. 15.

Table 2 *Comparison of Traditional Justice and ODR-Led Justice*

	Traditional Justice	ODR-Led Justice
Goals of Dispute Resolution	Resolve Conflicts	Prevent Disputes
Role of Courts	Arbiters	Process Managers
Role of Legal Professionals	Problem-Solver	Facilitator
Due Process	Procedural Safeguards	Flexibility needs and perceptions of parties
Use of Data and Information	Highlight the law, form judicial precedent	Collection and analysis for algorithm-based decision-making

4.1 *The Role of Courts and the Legal Profession*

In China, as in most other countries of the world, courts are particularly receptive to the expanded capacities ODR offers.¹²⁹ The adoption of ODR held a promise for reducing caseloads and costs, which is not only attractive for litigants, but also for overworked judges. ODR has incited the interest of the court system to help courts with overflowing court files and increasing number of litigants and their changing needs.¹³⁰ At the same time, ODR technologies made incorporations of court-referred ADR, or at least have judges inform litigants of particular options of ADR, much easier.¹³¹ For example, all three Internet Courts in China have launched mobile-based online mediation platforms. With the push of the state that ODR is increasingly viewed as part of the default justice provider in China, courts are beginning to see ODR as an essential component of themselves as well as a viable mechanism to supply justice.

As an initial matter, ODR programmes have transformed the role of judges in courtrooms. In ODR-led justice, we increasingly anticipate the court becoming a far more proactive player, performing a combination functions such as conflict analysis, prevention, mitigation and resolution. Judges, accordingly, will act as overseers rather than decision makers. In turn, people will turn to courts more as coordinators of resolution options and less as adjudicators of justice. By the same token, with the auspices of ODR technologies building on ADR options, the court will also continue to evolve into a settlement focus arena rather than a forum for adjudication. However, most Chinese judges are unprepared for these changing dimensions of justice. There is a lack of judicial talent that both masters Internet technologies and demonstrates a higher level of digital literacy.¹³² Therefore, Chinese judges need to improve their comprehensive practical abilities to interpret ODR data and continue to familiarize themselves with applications of AI, in order to make the most of this new way of delivering justice.

129 See Elayne E. Greenberg & Noam Ebner, 'Strengthening Online Dispute Resolution Justice', forthcoming in *Washington University Journal of Law and Policy*, 2020.

130 See Rabinovich-Einy & Katsh, *supra* note 1.

131 See Greenberg & Ebner, *supra* note 129.

132 According to Greensberg, digital literacies involve both technological fluency, or the ability to interface with a widening range of technological platforms and technologies, and the ability to communicate effectively through online media. See *supra* note 129.

Moreover, as most ODR approaches allow parties a more central role in voicing their desires and needs and in the decision-making phase, this also gives rise to a new understanding of the role of legal professionals as problem-solvers.¹³³ The legal profession is increasingly experiencing the disruptive force of new technologies as more and more automated systems provide self-help options to negotiate or mediate an outcome, or even to reach a settlement, making services of legal professionals less essential to the ultimate outcome.¹³⁴ Like in many Western countries, Chinese legal professions have also largely ignored how ODR's entry into the courts will change their daily practices. Most Chinese law firms have not started to explore new practice areas involving ODR, and neither have lawyers' associations.

This ignorance is coupled with traditional despise among Chinese legal professionals towards ADR and especially mediation practitioners.¹³⁵ As mediators' fees are currently below market level in China, there is less incentive for lawyers to develop their mediation skills or get involved in any meaningful mediation trainings or practices. Bilingual or trilingual talents who are trained in more than one jurisdiction have more opportunities to move to more lucrative dispute resolution industries such as arbitration and are therefore lukewarm towards the ODR uptake. The potential impact of ODR on delayering or lowering legal fees has also made some lawyers approach ODR systems with a certain level of hostility. Although the SPC has established an online platform to support lawyers file online, access to case files online, inquire case status online, make virtual contacts with judges and serve legal documents through electronic means, it has not generated much interest. However, and in practice, ODR with its lawyerless design will continue to be introduced to become a staple function in Chinese courts, transforming features of legal practice.¹³⁶ Although new programmes, such as Law and Technology Institute,¹³⁷ School of Artificial Intelligence and Law¹³⁸ and Computational Law Boot Camp,¹³⁹ have been introduced in law schools, these offerings vary in depth and quality, making it

133 See Carrie Menkel-Meadow, 'Towards Another View of Legal Negotiation: The Structure of Problem Solving', *UCLA Law Review*, Vol. 31, 1983, p. 754 (noting how the problem solving model can reach more optimal outcomes because advocates focus on actual objectives rather than assumed objectives).

134 For example, the Zhejiang ODR App has a ready to use interface that guide litigants to reach settlement step-by-step in a text-based context, without intervention of judges of legal professionals.

135 Mediation is free in charge according to Chinese laws, Art. 4, People's Mediation Law, People's Republic of China.

136 See also, Xueqiang Gao, 'Chinese Justice in the Age of Artificial Intelligence', *Journal of Zhejiang University (Humanities and Social Sciences)*, Vol. 49, No. 4, 2019, pp. 229-40 (discussing negative impacts of the use of automated decision-making system on the legal profession).

137 Renmin University Law and Technology Institute, <http://lti.ruc.edu.cn/home/index.htm>.

138 School of Artificial Intelligence and Law, Southwest University of Political Science and Law, <https://alc.swupl.edu.cn/>.

139 Tsinghua University Law School Held the First Computational Law Summer Boot Camp, www.law.tsinghua.edu.cn/publish/law/3567/2018/20180716144310660990896/20180716144310660990896.html.

difficult to determine whether they adequately prepare future legal professionals to meet changing needs in the field.

4.2 Due Process

Due process is essential in the design of any ODR system. As uses of technology become more prevalent in dispute resolution processes, our understanding of due process also needs to be upgraded. The International Center for Online Dispute Resolution recently articulated new standards for ODR for courts to consider as they gradually digitalize.¹⁴⁰ However, ODR has some inherent advantages that make ODR-connected courts extremely vulnerable to erosion of traditional belief in procedural due process.

Efficiency. Overall, the reprioritization of efficiency and cost-effectiveness in ODR-led justice calls into question whether expectations from procedural justice, whether in court, ADR or ODR, stay the same.¹⁴¹ Many ODR advocates recognize the rising conflicts between efficiency and fairness values that are under addressed in ODR.¹⁴² Caution rises as increased and more intensified development of ODR in the country might undermine existing reforms leading to improvement of procedural justice and quality of trials in China.

In today's legal world, efficiency is such a priority for litigants. A number of litigants are even willing to forego traditional notions of justice and participate in ODR processes without considering the downsides of these systems, challenging priorities of justice suppliers.¹⁴³ In this new way of efficiency maximization, some Internet Courts in China have innovated dispute resolution rules unduly preferring the convenience of litigants and at direct conflict with procedural laws. For example, the 'asynchronous trial mode' allows litigants and their representatives to log into online systems at different times and places to participate in mediation, cross-examination and other litigation activities.¹⁴⁴ On average, official sources estimated that relying on this new mode of trial, a total of six hours in travelling time is saved in each case.¹⁴⁵ However, Article 144 of the PRC Civil Procedure Law stipulates that if a defendant, after having been served with a summons refuses to appear in court without justified reasons, or if he withdraws during a court session without the permission of the court, the court may enter a default judgment.¹⁴⁶ On a related note, Article 68 of the PRC Civil Procedure Law stipulates that evidence shall be presented in court and cross-

140 *Fairness*, Ethical Principles for ODR Initiative.

141 *See, e.g.*, Rebecca Hollander-Blumoff & Tom R. Tyler, 'Procedural Justice and the Rule of Law: Fostering Legitimacy in Alternative Dispute Resolution', *Journal of Dispute Resolution*, Vol. 2011, 2011, p. 1.

142 *See* Julia Hornle, *Cross-Border Internet Dispute Resolution*, Cambridge University Press, Cambridge, 2009, p. 17 (discussing the conflict between effectiveness and due process in ODR). *See also*, the New Courts, p. 181 (nothing that preference of efficiency is usually at the expense of justice).

143 *See* Lee Rainie & Janna Anderson, *The Internet of Things Connectivity Binge: What are the Implications?* PEW Research Center (6 June 2017).

144 White Paper, *supra* note 4, p. 74.

145 *Id.*

146 Art. 144, Civil Procedure Law of People's Republic of China.

examined by the parties concerned,¹⁴⁷ while Article 14 of the ‘Procedural Guidelines for Class Trial of Internet Finance Contractual Disputes’, a newly promulgated procedural guideline by the Guangzhou Internet Court applicable to disputes arising from small loans made on the Internet, states that if the parties have completed the exchange of evidence before the court, the trial generally no longer organizes proof and cross-examination, eliminating further need for the parties to spend time.¹⁴⁸ These innovative measures are based on the practice needs of China’s ODR to improve efficiency and save costs for parties, but they conflict with the existing civil procedure rules, posing a difficult choice for parties between efficiency and due process safeguards.

Inherent Bias in Algorithms. Another obstacle of due process comes from the inherent bias in algorithm-based decision-making. Three levels of bias exist in the process, which significantly undermine the use of algorithm by Chinese judiciary, 1) accuracy in results; 2) ‘algorithm black boxes’ of ODR codes; and 3) conflicts of interests existed in public/private partnership in ODR system construction.

1) accuracy in results. One old problem of these systems is that results of algorithm-based decision-making are not always accurate.¹⁴⁹ Although AI and other types of well-built algorithms may help individuals in decision-making, it is not sure how useful these can be in more sophisticated cases.¹⁵⁰ Moreover, systematic bias has been discovered in these algorithm-based decision-making mechanisms, and coding errors and codes’ biases also may lead to skewed results.¹⁵¹ This problem will become more severe because internet courts in China have started use AI to determine results based on an analysis of similar cases according to factual attributes.

Apparently, uses of AI-based decision-making systems also depend on more accurate interpretation of these data to inform decision-making, but most judicial professionals lack adequate training in it.¹⁵² If such biases are hard to eliminate, at least they need to be adequately communicated to users. Regulations may well be needed to ensure any AI uses a decision matrix that is bias free.¹⁵³

2) ‘Algorithm black boxes’ of ODR. The use of algorithm and data analytics could also make the system less trustworthy because they are less subject to public oversight.¹⁵⁴ AI systems that learn to recognize patterns in data are often

147 Art. 68, Civil Procedure Law of People’s Republic of China.

148 www.gzinternetcourt.gov.cn/article-detail-342.html.

149 See e.g., Rabinovich-Einy & Katsh, *supra* note 1; Kiel Brennan-Marquez, ‘“Plausible Cause”: Explanatory Standards in the Age of Powerful Machines’, *Vanderbilt Law Review*, Vol. 70, 2017, pp. 1255-57 (arguing use of algorithm in law enforcement decision-making threatens traditional criminal justice system); Tal Z. Zarsky, ‘Transparent Predictions’, *University of Illinois Law Review*, Vol. 2013, 2013, p. 1506 (stating use of predictive practices based on analysis of personal information and data mining by law enforcement may result in biases).

150 Zarsky 2013.

151 See Sam Corbett-Davies et al., ‘Algorithm Decision-Making and the Cost of Fairness’; Emily Berman, ‘A Government of Laws and Not of Machines’, *Boston University Law Review*, Vol. 98, 2018 p. 1277; Chapman, *supra* note 127.

152 *Id.*

153 *Id.*

154 See Condlin, *supra* note 51, pp. 24-6.

described as ‘black boxes’ because sometimes even their developers do not know how they reach their conclusions. As expert algorithms that drive ODR systems are secret and known only to their owners and creators, participants in such systems have no way of knowing or contesting the conceptions of correct outcome on which these algorithms are based, or the accuracy of the information on which the conceptions themselves are based. These will impact the trustworthiness of these ODR platforms.¹⁵⁵

3) Conflicts of interests existed in public/private partnership. Another source of potential bias in ODR platforms is the public-private partnership model that has been utilized by the Chinese judiciary. These partnerships are inherently beneficial because they allow cost-effective collaboration models in technology innovations and are therefore favoured by both ODR technology developers and the Chinese judiciary.¹⁵⁶ However, such public-private partnerships raise additional impartiality concerns.¹⁵⁷ Courts hiring third-party technology providers will have to take special care to be sure that this public-private collaboration does not create even the appearance of bias, and such systems might need to ensure that no potential conflict of interest arises.¹⁵⁸ Therefore, these collaborations must be subject to a higher level of scrutiny when it impacts the quality of the justice system.

Overall, the unique standing of the judge and the courts in the eyes of the public, coupled with the court users’ expectations of the absence of bias by the decision maker, renders the impartiality principle more acutely important in ODR-led courts. Eventually, new ways that ensure due process must be designed. These new systems must ensure traditional values of procedural safeguards, such as fully litigated cases, neutral decision-making and transparency, and new needs, such as access to participation, accuracy and bias-free of socio-economic status. E-courts and ODR professionals also must abide by the bedrock standards of confidentiality, impartiality, competence and quality of process.¹⁵⁹

4.3 Data and Information Safety

Finally, a related concern has to do with information and data use and collection by the public judiciary for dispute prevention purposes. Currently, this is a rather uncharted territory in courts and requires rigorous thinking about the ethical and regulatory guidelines for such activities.¹⁶⁰

Often, Big Data allows monitoring of the quality of process and outcomes, uncovers biases and problems in the operation of dispute resolution algorithms and even provides for dispute prevention. Instead of waiting for human third

155 *Id.*

156 For example, Gridsum Holding company (NASDAQ: GSUM), a Chinese company listed on the NASDAQ, is one publicly traded company that has engaged in collaboration with the Chinese judiciary in developing court-connected ODR systems.

157 See Schmitz, *supra* note 2, p. 144.

158 *Id.*

159 See Daniel Rainey, ‘Third-Party Ethics in the Age of the Fourth Party’, *International Journal of ODR*, Vol. 1, No. 37, 2014, pp. 42-52.

160 See Rabinovich-Einy & Katsh, *supra* note 1.

parties, collected data can automatically uncover disputes before parties are even aware of them. It can also help to indicate more broadly whose problems are not being addressed within the legal system and signal the need for the law to generate appropriate legal categories and provide redressal. Traditionally a Confucian society favouring the values of harmony, the dispute prevention goal is important for the Chinese state and policymakers, and remains one of the driving forces of the Smart Justice movement.¹⁶¹ Dispute prevention relies on the collection, analysis and sharing of a large amount of dispute data, but to a certain extent, it will also bring hidden dangers to data security. Public courts have available decisions of judges and statistical data on enormous categories of cases and therefore are natural territories likely to be subject to data abuse.¹⁶²

Data safety remains a concern worldwide and is believed to be one of the biggest obstacles preventing the wider promotion of ODR.¹⁶³ For potential ODR users internationally, some have pointed out “high standards and data security were seen as a basic requirement to ensure trust and take-up of ODR technologies”.¹⁶⁴ Currently, many types of technologies developed by China’s ODR forums involve intensive uses of AI and other automated technologies. These all require extensive collection of user information and litigation-related data. For example, the White Paper mentions that an intelligent service platform built by the Jiaying Intermediate People’s Court collects “litigants address information with mobile phone numbers, active address of civil activities, addresses registered with governmental agencies and successful service records in courts”; it never explains why information such as litigants’ mobile phone numbers and active address of civil activities are needed for dispute prevention and algorithm-based decision-making, leaving gaps for potential inquiries.¹⁶⁵

At present, the demand for data security is also getting higher and higher in China. On 28 May 2019, the PRC National Internet Information Office published the ‘Measures for Data Security Management (Draft for Comments)’, which puts forward more stringent requirements for data collection, use, supervision and management, and will affect the ODR platform’s large-scale analysis and utilization of data and limit the ODR platform’s function of dispute prevention.¹⁶⁶ On 30 December 2019, the PRC Ministry of Industry and Information Technology further promulgated a new regulation of ‘Guidelines on Determining Illegal and Illicit Collection and Use of Private Information’, which elevated standards of collecting personal information by commercial apps.¹⁶⁷ However, it is unlikely these data regulations will be applied to govern and regulate courts and other public entities.¹⁶⁸

161 See Long, *supra* note 50.

162 The Impact of ODR Technology on Dispute Resolution in the UK, Thomson Reuters White Paper, Spring 2016.

163 See *e.g.*, *Id.*, p. 15.

164 *Id.*, p. 16.

165 White Paper, *supra* note 4, p. 77.

166 *Id.*

167 *Id.*

168 *Identification Methods of the Illegal Collect and Use of Personal Information by Mobile Apps* (2019).

This increasing tension between confidentiality and accessibility also emerged with respect to how the information shared by the user will be used by the courts. In some forms of negotiation and bargaining processes, information shared often had an impact on the results obtained. Deliberate rules governing the uses and sharing of dispute resolution-related information often exist in most kinds of ADR.¹⁶⁹ However, the very advantages of ODR have resulted in reduced confidentiality of users' information. Examples underscore the importance of educating parties of the general confidentiality of information shared prior to a trial, and their need for prudence in deciding which information shall be admitted into evidence, as lines between pre-trial and trial processes are often obscured in ODR. In addition, the user has to be assured of measures taken to ensure the security of data in the system. At the education or self-help stage, it is better that information shared will not become part of public records. One solution is for courts to disclose data needs to be collected and used and set a boundary within their work. Therefore, the courts will need to highlight the potentially limited confidentiality and that information shared might be anonymized and aggregated for the purpose of data analysis.

5 Conclusion

To many, ODR is not only a dispute resolution method, but also a disruptive weapon that is very likely to cause the next paradigm shift in the field of justice.¹⁷⁰ Although historically China has been criticized for its weak rule of law system, as providing insufficient security safeguards and access to justice to international parties, it has proven itself a leader in ODR in its recent reforms involving both private dispute resolution service providers and public adjudicative forums. Advantages of ODR, such its improvement of efficiency, cost-effectiveness and flexibility of dispute resolution process, and its positive impact on consistency, transparency and data security, are needed by China to improve the image of its dispute resolution sectors worldly. However, the tactic jurisdictional premise of ODR – that outcomes dictated by algorithms based on Big Data and crowd-sourced data will produce just results – has never been tested in any well-known theory of procedural fairness or substantive justice.¹⁷¹ Therefore, the era of the quick rise of ODR-led justice in China easily presents a cautionary tale.

Meanwhile, ODR-led justice has transformed traditional notions of justice in many significant ways. Increasing use of ODR technologies in the construction of Smart Courts in China alters power relations, institutional capacities, judicial outcomes and eventually the overall justice experience. Policy incentives leading to more and faster adaptation of ODR technologies in courts will continue to

169 See generally, James J. Restivo Jr. & Debra A. Mangus, 'Confidentiality in Alternative Dispute Resolution (ADR): Confidential Problem-Solving or Every Man's Evidence?' *Alternatives to High Costs of Litigation*, Vol. 2, No. 5, 1984, p. 5.

170 See e.g. Rabinovich-Einy & Katsh, *supra* note 1.

171 See Raymond & Shackelford, *supra* note 1.

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ascend values associated with accessibility, efficiency, predictability, dispute prevention while posing serious concerns in terms of principles such as impartiality, confidentiality and professionalism in the dispute resolution process. Even though courts equipped with ODR technologies are inevitable in the near future, at least important steps also need to be taken to ensure that ODR processes in China are more fairly presented and interpreted, better safeguarded by procedural rights, together with calling for more cautious use of AI and other types of technologies infringing the privacy rights of system users. That being said, the thought of creating fully integrated ODR systems for Chinese courts definitely requires attention, not only in terms of technology advancement, but also in measuring technology's impact on the conception of justice. With more research effort ought to be spent in the area, we remain hopeful of the process.